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IF you have the BASIC Videocade and want to increase your knowledge of computer programming, or want to take advantage of the hundreds of games, etc., now available on cassette tape, then the ARCADIAN is for you!!!

This monthly publication is written for all levels of user expertise - we have tutorial material in each issue that caters to Beginner, Intermediate, and Advanced levels. We dig into the computer and tell you how to make your own characters, musical selections, screen effects, etc., plus news of upcoming hardware, programs you can enter and play in each issue, contests and plenty more!

A subscription to Volume 5 is \$15 - covering all issues from November 1982 to October 1983 (CAN \$20)

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NEWS**

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Title	YR	Type	Number of Equipment Players Required
ASCADIAN NEWSLETTER (ASCI)	Bob Fabris, Publisher		
82 Tutorial	88, AB		
82 Misc.	AB		
5 Circuit: Layout	BB		
Chemistry: Symmetrical	1P BB, 1H		
52 Game, Space	BB, 1H		
52 Game, Maze	BB, 1H		
51 Time	BB, 1H		
79 Game, Casino	1-4P BB, 1-4H		
88 Graphics	BB, AB, 2H		
88 Game, War	2P BB, 2H		
81 Tutorial	BB		
82 Game, Skill	1-4P BB, 1-4H		
79 Game, Chase	1P BB, 1H		
88 Tutorial	BB		
79 Tutorial, Logic	BB		
79 Tutorial	BB		
59 Tutorial	BB		
81 Game, Logic	1-4P BB, 1-4H		
79 Game, Skill	2P BB, 2H		
79 Game, Sport	2P BB, 2H		
82 Game, Sport	2P BB, 2H		
82 Game, Skill	BB		
88 Utility	BB		
2P BB, 2H	BB		
52 Game, War	BB		
58 Educational	2P BB		
88 Game, Board	1P BB, 1H		
79 Personal	BB		
79 Personal	BB		
88 Game, Logic	1P BB		
88 Game, Space	BB		
38 Tutorial	BB, BR		
81 Graphic Chase	1P BB, 1H		
2P BB, 2H	BB		
88 Game, Sport	2P BB, 2H		
82 Game, Skill	1P BB, 1H		
82 Business	BB		
82 Tutorial	BB, AB		
82 Tutorial	BB, AB		
82 Tutorial	BB, AB		
82 Game, Skill	2P BB, 2H		
79 Tutorial	BB		
81 Game, Board	1P BB		
81 Graphics	BB		
88 Educational	1-2P BB, 1-2H		
81 Graphics	BB		
79 Game, Skill	BB		
88 Educational	BB		
81 Graphics	BB		
81 Graphics	BB		
82 Game, Logic	BB		
82 Graphics	BB		
82 Graphics, Utility	1P BB		
82 Game, Logic	BB		
81 Business	BB only		
88 Graphics, Art	BB		
88 Game, Skill	2P BB, 2H		
88 Game, Logic	1-2P BB, 1-2H		

Title	YR	Type	Number of Players	Equipment
Count the Dots	88	Game, Skill	1P	BB, 1H
Creating Spec. Graphics	81	Tutorial	2P	BB
Crystl-O-Grams	81	Game, Logic	1P	BB, 1H
Darts	81	Game, Skill	1-2P	BB or AB, 1-2H
Day of Steak	79	Tutorial	BB	
Day of Hunk & Calendar	89	Game	1P	BB, 1H
Distance between 2 Pts	81	Game, Personal	1P	BB
Digital Couch	82	Game, Skill	1P	BB, 1H
DMD Speedway	82	Game, Skill	1P	BB, 1H
Elect. Visual. Center	82	Game, Skill	1P	AB, 1H
File Search	88	Tutorial	BB only	
File Frequencies	79	Sound	BB	
Frog	82	Game, Skill	1P	BB or AB, 1H
Good Guess	81	Game, Skill	1P	BB only
Golf 68	81	Game, Sport	1-4P	BB, 1-4H
Grandfather Clock	81	Time, Graphics	BB	
Graphic Character Maker	88	Graphics	BB	
Graphic Program	82	Graphics	BB	
Graphic Tablet Simulator	82	Graphics	BB	
Halloween Ghost	88	Graphic, Economic	1P	BB, 1H
Hemurad	79	Game, Word	2P	BB, 1H
Hello Dolly	79	Music	BB	
Hex Poker	81	Utility	BB	
Hex to Decimal	82	Utility	BB	
Horizontal Scrolling I	82	Tutorial	AB	
Horse Race	88	Game, Sport	1-4P	BB or AB, 1H
Horse Race	88	Game, Sport	1-4P	BB or AB, 1H
Hyd-O-Grams	79	Tutorial	BB	
If Statements	79	Tutorial	BB	
IF AND/OR	79	Tutorial	BB	
Interrupt Routine	81	Utility	1P	BB, 1H
I/O Switch	81	Game, Space	AB	
Jelly & Hyde	82	Project	AB	
Keno II 2.8	81	Game, Maze	2P	AB, 2H
Line Corder	82	Game, Space	1P	BB or AB, 1H
LINE Numbers	82	Tutorial	AB	
LINE Names	82	Tutorial	AB	
Logo	79	Graphics	BB or AB	
L-I Reverse Box Set	82	Graphics, Art	MLH	
Machine Language	82	Graphics, Review	MLH	
Machine Language Monitor	82	Review	MLH	
Magic Register	82	Tutorial, Graphics	1P	BB
Masternind I	88	Game, Logic	1P	BB
Masternind II	88	Game, Board	1-2P	BB
Memory Addressing	79	Tutorial	BB	
Memory Contents-Binary	79	Utility	BB	
Memory Control	79	Utility	BB	
Memory Dots	79	Utility	BB	



48-88 Differences	82 Tutorial	Gobblers -	81 Game, Skill	Polo	81 Game, Duce
AB Circuit Layout	82 Misc.	Golf	81 Game, Graphics	Polve the Sailor	79 Tutorial
Alchemysmetrical	81 Graphics	Grandfather Clock	81 Time, Graphics	Pre-Tutorial Pixels	82 Tutorial
Alien	81 Graphics	Graphic Character Maker	81 Graphics, Utility	Programming Tech. I	81 Tutorial
Amazed in Space	79 Game, Maze	Graphics Assembler	82 Graphics	Programming Tech. II	81 Tutorial
Analog (Nongdial) Clock	79 Game, Casino	Graphic Tablet Simulator	82 Graphics	Program Title & Instr.	79 Tutorial
ARCADIAN Sampler	88 Graphics	Halloween Ghost	88 Graphics	Px Function	79 Tutorial
Artillery Duel	88 Game, War	Hammabi	88 Game, Economic	Quadron	82 Game, Skill
ASTROVISION Editor	81 Tutorial	Hangman I	88 Game, Word	Random Art	79 Graphics
ASTRO ZAP \$188	79 Game, Chase	Heil Delly	81 Utility	Rebounding	81 Game, Skill
Backround/Foreground	88 Tutorial	Hex to Decimal	79 Utility	Reverse	79 Utility
Bagels	79 Game, Logic	Horizontal Scrolling	82 Tutorial	Reverse Title	79 Game, Logic
BALLY BASIC Text Area	79 Tutorial	Horizontal Scrolling II	82 Tutorial	Saucer Operation	79 Tutorial
BALLY BASIC Translations	79 Tutorial	Horsepower	88 Game, Sport	Screen Printer	82 Interface
BALLY Black Box	81 Game, Logic	Hypercube	88 Tutorial	Serial and Parallel	88 Tutorial
BALLY Black Box	81 Game, Skill	Hypod Programs	79 Tutorial	Short Game Selection	81 Graphics, Math
Banquet	79 Game, Word	If Statements	79 Tutorial	Simon Machine I	79 Game, Logic
Baseball	82 Game, Sport	If Statements	79 Tutorial	Simon Machine II	79 Game, Logic
Base Conversion	88 Utility	If, And, Or	81 Game, Space	Slot Machine I	88 Game, Casino
Battleship	79 Game, War	Interrupt Routine	82 Project	Slot Machine II	88 Game, Casino
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Blip	78 Game, Board	Laser Evader	82 Game, Space	Speed O Math	88 Game, Math
Biorhythm I	79 Personal	Laser Evader	82 Game, Space	Spinning Wheel	81 Game, Casino
Biorhythm II	79 Personal	Line Numbers	82 Tutorial	Spirals I	88 Graphics
Blackbox	88 Game, Logic	Logo	79 Graphics, Art	Spirals II	88 Graphics
Blackbox	88 Game, Space	L-I Reverse Box Set	79 Graphics, Art	Square Root	81 Game, Space
Blue Run Programming	81 Graphics	Machine Code Programming	82 Review	Star Siege	82 Game, Skill
Boo	88 Graphics	Machine Language	82 Tutorial, Graphics	Stranded on Rigel 5	82 Game, Space
BOTS	88 Game, Chase	Machine Language	82 Tutorial, Graphics	Strategic Air Command	81 Game, War
Bowl a Rame, Wall	88 Game, Skill	Macro Register	82 Tutorial, Graphics	Subroutines	88 Tutorial
Brickwork	82 Business	Magic Register	82 Tutorial, Graphics	Surf Hunter	81 Game, War
Brickwork \$188	82 Business	Mastermind	88 Game, Logic	Surf Sounds and Crickets	81 Sound
Cartridge Conversion	82 Tutorial	Mastermind II	88 Game, Logic	Symmetrical Art	81 Graphics
Cartridge Swapping I	82 Tutorial	Match Addressing	79 Utility	Tape Duplication Ckt	82 Project
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Catchers & Print Loc.	79 Tutorial	Memory Contents-Binary	79 Utility	Tapping Memory	88 Tutorial
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Checkers II	79 Game, Board	Memory Display	79 Utility	The CUBE \$188	82 Game, Logic
Circles	81 Graphics	Memory Doodle I	81 Graphics	The Pits	82 Game, Maze
Circles	82 Game, Skill	Memory Doodle II	81 Graphics	Touch Tone Simulate	79 Sound
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Color-Decode	81 Game, Logic	Microtek	79 Game, Space	Word Hunt \$188	82 Game, Word
Color Chart	81 Graphics	Monthly Loan Program	88 Business	Zapzee	88 Game, Dice
Color Monitor	81 Graphics	Morse Code	88 Educational	1K Memory Addition	82 Project
Color Selector	82 Graphics, Utility	Motherboard Modification	81 Project	3 Letter Music Maker	88 Tutorial
Columns	82 Game, Logic	Musical Staffing Ph I	81 Music	402 Acc Music	81 Graphics
Compound Interest	81 Business	Musical Staffing Ph II	81 Music	2088 AD	88 Game, Space
Computer Crochet	82 Graphics, Art	Musical Staffing Ph III	81 Music		
Connect Four I	88 Game, Logic	Musical Synthesizer Ph I	79 Tutorial		
Connect Four II	88 Game, Logic	Musical Synthesizer Ph II	79 Tutorial		
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Creating Spec. Graphics	81 Tutorial	Name and Nicomachus	88 Game, Number		
Crypt-O-Grams	82 Game, Logic	New Graphic Char. Maker	81 Graphics		
Dreadowl	81 Game, Race	New Music Program	81 Tutorial, Music		
Drift Stage	81 Game, Skill	Night Raid	82 Game, War		
Day of Week & Calendar	79 Tutorial	Nim	81 Game, Logic		
Defuse	88 Time	Nim	81 Educational, Game		
Digital Couch	81 Game, Hunt	Nuclear Math	79 Game, Number		
Distance between 2 Pts	81 Game, Personal	Number Match	79 Game, Number		
Distance between 2 Pts	82 Game, Skill	Old Bent	82 Game, Board		
Elect. Visual, Center	88 Graphics	Old Bent	82 Game, Board		
Extensinator	88 Graphics	One Man Bowling	82 Game, Sport		
Extensinator	88 Graphics	Orbit Demo	82 Tutorial, Game		
File Search	82 Tutorial	Overcoming Loading Prob.	82 Tutorial		
Frequencies	79 Sound	O-Jello	88 Game, Logic		
Frog	82 Game, Skill				

# ARCADIAN

Thank you for your interest in our product, the ARCADIAN Newsletter, which is published for ARCADE\* owners having the BASIC Videocade\*.

The ARCADIAN provides its readers with the following features:

**PROGRAMS:-** over 150 programs have been published in the first 40 issues, providing the reader with GAME, TECHNICAL, and FUN diversions.

**TUTORIALS:-** to explain, in both general and specific areas, how and why the ARCADE\* works the way it does, and how you can utilize this information to get special effects.

**HARDWARE:-** we provide you with the latest authoritative news on factory events regarding the release of new Videocades\*, and other items. We also document the various expansions and additions that subscribers have been successful in attaching to their ARCADE\*.

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# ARCADIAN

## NOTES

These NOTES are provided to introduce the new ARCADE owner to techniques and effects that can be generated by the Tiny Basic cartridge. Considerably more detail can be found in the ARCADIAN articles referred to in the text. In addition, a listing of available publications that can assist the more advanced programmer is included.

The ARCADIAN articles were written as descriptions of the original "Bally Basic". While this cartridge has been superseded by the current "AstroVision Basic", the explanatory material remains applicable. As new material is discovered and developed by experimenters, it will be documented in the ARCADIAN.

Your inputs are solicited, as production of the ARCADIAN is almost totally based on subscriber inputs.

**SCREEN CHARACTERS** The Arcade divides the tv screen into 16320 individual dots, called pixels. This is disposed at 102 high by 160 wide. The lettering of the Arcade is 5 pixels wide-plus one, and 7 pixels high-plus one. (The 'one' is to prevent adjacent letters from running together.) A full explanation of controlling location is defined in Vol. 1, page 50, while methods to drive the lettering size upwards start on page 45.

Home-brewed characters can be generated by means of a method defined in Vol. 3, page 83. In this program, a 16x10 matrix can be selectively filled in to create a character. A further expansion of this technique is described in Vol. 3, page 128, wherein the computer is made to do most of the work.

**MEMORY DUMPS** The Basic can be asked to identify what is located within its memory registers in binary or hexadecimal notations by some simple programs. (binary, Vol 1, p.43; hex, page 44, for example)

**SOUND GENERATION** lengthy explanation of the operation of the sound systems is found in Vol. 1, pages 62-66 and 70-73

**MUSIC GENERATION** (using the available three-tone system) is a subset of the sound generation system, and is covered by articles in Vol. 2, page 62, and Vol 4, page 10

**MACHINE CODE** programs are possible in the Arcade:-

%(n) activates the PEEK/POKE relationship. In order to perform a PEEK function, where one observes what is stored in a memory location, one commands A=%(nnnn) then a PRINT A will result in the value located in location nnnn

To place A into location nnnn, one commands %(nnnn)=A.

CALL is a direct command to intercept a program within the system ROM. Try CALL 3177 or CALL 4910.

Putting all of this together, and knowing how the insides of the Arcade works, enables one to write programs in machine code directly from the Keypad. The first article discussing this is in Vol. 1, page 25. There are a number of subsequent articles touching on various parts of the problem.

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WELCOME TO THE FASCINATING WORLD OF ARCADE PROGRAMMING!

The enclosed programs were selected to help you enjoy your Arcade-Plus game unit, and were originally published in the ARCADIAN. If you review the programs included here against their listing in the ARCADIAN, you will find that we have made some procedural changes in order to be compatible with your new Basic cartridge. These programs are presented as "listings" - all the instructions necessary for the computer to operate, in a standardized format that the computer understands.

These programs have all been checked for operation and you should have no problem with them. Read the Manual that came with the Basic in case you have difficulty - and here are a couple of Instructions that are useful for any program you wish to enter.

## 1. Make NO modifications.

2. It is implied that every line ends with a 'WORDS GO' entry, that is equivalent to a typewriter's carriage return. Up to this point, you could make changes, correct errors, etc., because the work you were doing was being temporarily stored in a "keypad buffer". Once you press the 'WORDS GO' sequence, that work is transferred to the computer and the keyboard buffer is ready for another line of input.

3. Punctuation marks have a different meaning to the computer. Do not substitute, add, or delete any.

4. After the last line entry, type in "WORDS RUN GO" to get the program into operation.

5. If the computer has a problem and questions your instruction, the instruction will be listed with a question mark at the problem area. First LIST the line in question (for example, if the computer prints line 140 on the screen, enter "LIST 140, 1 WORDS GO". This will list only line 140, just as it was entered.) and see that it is exactly as you wanted it, especially in the area where the question mark was. Next, make sure that the computer can do what you want it to - is it supposed to go to a subroutine that isn't there? or use a variable that has not been entered? are there enough terms for a LINE or BOX command? etc.

6. If the problem is unsolvable, list the program to a tape, send it to us, and we'll return a "fixed" program to you.

7. Once the program is running, you can store it on tape for your future use. And after it is stored, you can start to manipulate the program in the computer and make whatever modifications you might wish.

All programs are available on a single tape, at \$7.50 postpaid.

## PROGRAM NAME BAGELS

ISSUE Volume 2 page 25

### AUTHOR

Carl Morimoto  
4003 Hamilton Park Dr.  
San Jose, CA 95130

### DESCRIPTION

The computer picks a three-digit number (no duplicate digits) that you have to guess. Each time that you make a three-figure guess, the computer responds with one of the following:

BAGELS no digit is correct  
PICO one correct digit in the wrong place  
PICO-PICO two or more correct digits in the wrong place  
FERMI one correct digit in the right place  
FERMI-PICO one correct digit in the right place, and one or more correct digits in the wrong place  
FERMI-FERMI two or more correct digits in the right place

When you think that you have the right numbers, press GO, and the computer will respond. If you want to give up, enter three zeros 000

### LISTING

```
50 CLEAR :NT=0:FC=66:BC=7
60 Z=300
70 O=0;W=0;D=0;C=0;U=0;F=0
100 BOX 5,-5,80,50,1;BOX 5,-5,78,48,3
110 CX=-40;CY=20:PRINT "BAGELS
120 BOX -25,20,49,11,3
130 NT=5;FOR A=1 TO 15
140 CX=RND (3)*20-40;CY=RND (5)*8-30
150 FOR B=1 TO 3:TU=47+RND (10);NEXT B:NEXT A
160 NT=0;FC=252
170 CX=25;CY=-39:PRINT "PRESS GO",
175 BOX 53,-39,13,9,3
180 A=RND (10)
190 IF &(23)=0 GOTO 180
200 @ (4)=RND (10)-1:@ (7)=@ (4)
210 @ (5)=RND (10)-1
220 IF @ (4)=@ (5) GOTO 210
230 @ (8)=@ (5)
240 @ (5)=RND (10)-1
250 IF (@ (6)=@ (4))+@ (6)=@ (5) GOTO 240
260 CLEAR :G=0;O=0+1;FC=7;BC=243
270 CY=40:PRINT " GAME",@3,Q
280 IF U CX=0;CY=40:PRINT "AVERAGE",@3,U,".",@1,F
300 NT=0;CX=-77:PRINT "
310 NT=1;CX=-77:PRINT @2,G+1,">".
320 FOR A=1 TO 3
330 X=KP:IF X=31 GOTO Z
340 TU=X
350 IF (X<48)-(X>57) GOTO 900
360 @ (A)=X-48:NEXT A
370 IF @ (1)+@ (2)+@ (3)=0 GOTO 750
380 IF (@ (1)=@ (2))+@ (1)=@ (3))+@ (2)=@ (3) GOTO 910
500 G=C+1;P=0
510 FOR A=1 TO 3
520 IF @ (A)=@ (A+3) P=P+4
530 IF @ (A)=@ (A+4) P=P+1
540 IF @ (A)=@ (A+5) P=P+1
550 NEXT A
```

```
510 IF P=0 PRINT " BAGELS";GOTO Z
520 IF P=1 PRINT " PICO";GOTO Z
530 IF P=3 PRINT " PICO-PICO";GOTO Z
540 IF P=4 PRINT " FERMI";GOTO Z
550 IF P=7 PRINT " FERMI-PICO";GOTO Z
560 PRINT " FERMI-FERMI"
570 PRINT " GAME GUESSES ",A=KP
580 IF A=13 GOTO 700
590 PRINT " NO",NT=30;MU=20;MU=18;MU=18;GOTO Z
700 CX=CX-12:PRINT " ";PRINT :IF P#12 GOTO 740
710 PRINT " YOU GOT IT":W=W+1;BC=155
720 NT=8;A=48;MU=99;MU=53;MU=A;MU=49;MU=A;MU=A;MU=A
730 MU=58;MU=49;MU=50;MU=50;MU=51;MU=A;MU=51;MU=A;MU=51;MU=A;
GOTO 790
740 PRINT " SORRY, WRONG NUMBER":D=D+1;BC=66;GOTO 750
750 PRINT :PRINT :PRINT " GAVE UP":BC=123
760 PRINT " CORRECT NUMBER WAS ",@1,@4,@ (5),@ (6)
```

```
770 NT=10;MU=51;MU=45;MU=51;MU=51;MU=45;MU=51;MU=51
780 MU=99;MU=55;MU=50;MU=49;MU=99;MU=54;MU=48;MU=48
790 NT=0
800 C=C+G;IF W=0 GOTO 850
910 U=C-W;F=(RM,10)*W
820 PRINT "STAT. AFTER GAME",@2,Q
830 PRINT " * GAMES WON ....",@2,W
840 PRINT " * GAMES LOST ....",@2,D
850 PRINT " AVE * GUESSES...",@2,U,".",@1,F
860 GOTO 180
900 PRINT " INPUT ERROR",:GOTO 920
910 PRINT " DUPLICATE DIGITS",
920 NT=5;FOR A=1 TO 10;MU=87;MU=84;NEXT A
930 GOTO Z
```

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# ARCADIAN

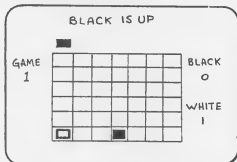
PROGRAM NAME: CONNECT FOUR

ISSUE: Volume 2 page 35

AUTHOR Larry Cannitz  
2106 Hastings St.  
Orlando, FL 32808

## DESCRIPTION-

The object is to get four squares in a row while preventing your opponent from doing the same. Use hand controllers (1) and (2). When four squares are lined up, move the joystick sideways to register the win.



## LISTING-

```

10 BC=125
20 FC=0
30 NT=0
900 P=1;L=1;M=0;N=0
950 CLEAR:GOSUB 3000
960 CLEAR
1000 BOX -4,-36,118,10,2
1002 CX=-70;CY=20;PRINT "GAME",
1004 CX=45;CY=20;PRINT "BLACK",
1005 CX=58;CY=-20;PRINT "O",M
1006 CX=45;CY=-10;PRINT "WHITE",
1007 CX=58;CY=10;PRINT "I",N
1008 CX=-64;CY=10;PRINT "O",L
1010 BOX -4,-3,87,56,1
1020 FOR B=-40TO 32STEP 12
1030 FOR C=20TO -25STEP -9
1040 BOX B,C,11,8,2
1050 NEXT C
1060 NEXT B
1070 X=-40
1080 D=-34;E=-34;F=-34;G=-34;H=-34;I=-34;J=-34
1100 CY=40;IF P=1PRINT "←7→BLACK IS UP";GOTO 1600
1110 CY=40;IF P=2PRINT "      WHITE IS UP";GOTO 1600
1200 IF TR(1)=1GOTO 2000
1210 IF JX(1)=1GOTO 1500
1220 IF JX(1)=1GOTO 1510
1230 IF JY(2)=1GOTO 3500
1240 GOTO 1200
1400 IF TR(2)=1GOTO 2000
1405 IF &(22)=1GOTO 900
1410 IF JX(2)=1GOTO 1500
1420 IF JX(2)=1GOTO 1510
1430 IF JY(1)=1GOTO 3500
1440 GOTO 1400
1500 X=X+12;GOTO 1600
1510 X=X-12;GOTO 1600
1600 IF X<-40X=-40
1610 IF X>32X=32
1620 BOX -4,30,100,6,2
1700 BOX X,30,9,6,1
1705 IF P=2BOX X,30,5,4,2
1706 NT=1
1710 MU="Y";MU="Z"
1711 NT=0
1720 IF P=1GOTO 1200
1730 IF P=2GOTO 1400
2000 IF X=-40D=D+9;GOTO 2200
2010 IF X=-20E=E+9;GOTO 2300
2020 IF X=-10F=F+9;GOTO 2400
2030 IF X=-4G=G+9;GOTO 2500
2040 IF X=0H=H+9;GOTO 2600
2050 IF X=20I=I+9;GOTO 2700
2060 IF X=32J=J+9;GOTO 2800
2200 BOX X,D,9,6,1
2210 IF P=2BOX X,D,5,4,2;P=1;GOTO 1100
2220 P=2;GOTO 1100
2300 BOX X,E,9,6,1
2310 IF P=2BOX X,E,5,4,2;P=1;GOTO 1100
2320 P=2;GOTO 1100
2400 BOX X,F,9,6,1
2410 IF P=2BOX X,F,5,4,2;P=1;GOTO 1100
2420 P=2;GOTO 1100
2500 BOX X,G,9,6,1
2510 IF P=2BOX X,G,5,4,2;P=1;GOTO 1100
2520 P=2;GOTO 1100
2600 BOX X,H,9,6,1
2610 IF P=2BOX X,H,5,4,2;P=1;GOTO 1100
2620 P=2;GOTO 1100
2700 BOX X,I,9,6,1
2710 IF P=2BOX X,I,5,4,2;P=1;GOTO 1100
2720 P=2;GOTO 1100
2800 BOX X,J,9,6,1
2810 IF P=2BOX X,J,5,4,2;P=1;GOTO 1100
2820 P=2;GOTO 1100
3000 CY=20;PRINT "←6→CONNECT FOUR
3010 PRINT "INPUT " NUMBER OF GAMES?"K
3020 RETURN
3500 CX=-56;CY=-38;PRINT "WHITE CONNECTS FOUR"
3510 M=M+1;CX=58;CY=-20;PRINT "O",M
3515 L=L+1
3520 IF L-1=KGOTO 4500
3530 IF TR(2)=1GOTO 1000
3540 GOTO 3530
3600 CX=-56;CY=-38;PRINT "BLACK CONNECTS FOUR
3610 N=N+1;CX=58;CY=10;PRINT "O",N
3615 L=L+1
3620 IF L-1=KGOTO 4500
3630 IF TR(1)=1GOTO 1000
3640 GOTO 3630
4500 CY=40;PRINT "←10→GAME OVER "
4510 IF &(22)=1GOTO 900
4520 GOTO 4510

```

←N→ INDICATES  
"LEAVE  
N SPACES"

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## PROGRAM NAME BINGO

ISSUE

Volume 2 page 34

### AUTHOR

Ernie Sams  
248 S. Forest St.  
Bellingham, WA 98225

### DESCRIPTION

The computer plays against you, with one Bingo card each. The computer randomly draws numbers and displays them on the screen. Turn the knob to indicate whether you have the number (yes ☐ no ☐) and pull the trigger to register. The computer then checks its card.

B	I	N	G	O	B	I	N	G	O
8	23	34	54	62	5	27	45	60	69
10	27	42	50	75	11	19	34	54	67
6	28	4	52	65	14	20	C	58	63
15	16	40	53	63	12	30	44	57	68
11	29	36	60	72	4	24	40	53	64

\*75 UNDER O ☒

### LISTING

```

30 CLEAR :NT=1:FC=179:&(23)=255
40 &(9)=84:&(8)=7:&(1)=7:&(2)=88:&(3)=88
50 BOX -40,9,68,65,1:BOX -40,4,64,49,2
60 BOX 34,9,68,65,1:BOX 34,4,64,49,2
70 CX=-64:CY=36:PRINT "B I N G O":CX=18:PRINT "B I N G O",
80 FOR L=-60TO -21STEP 13:BOX L,10,1,64,1:BOX L+74,10,1,64,1:NEXT L
90 FOR L=-11TO 19STEP 10:BOX -40,L,68,1,1:BOX 34,L,68,1,1:NEXT L
100 C=0:D=0:X=-69:Y=34
110 FOR L=1TO 125:@(L)=0:NEXT L
120 FOR L=75TO 95STEP 5
130 FOR M=1TO 5
140 N=RND (15)+C
150 IF @(L+1)=N+@((L+2)=N)+@((L+3)=N)+@((L+4)=N)+@((L+5)=N)GOTO 140
160 @(L+M)=N
170 CX=X:CY=Y+(-M,10):PRINT #2,N,
180 N=RND (15)+C
190 IF @(L+25)=N+@((L+27)=N)+@((L+28)=N)+@((L+29)=N)+@((L+30)=N)GOTO 180
195 @(L+25+M)=N
200 CX=X+74:CY=Y+(-M,10):PRINT #2,N,
210 NEXT M
220 C=C+15:X=X+13
230 NEXT L
232 FOR L=1TO 3:CY=4:CX=-48:PRINT "H":CX=34:PRINT "C",
233 BOX -40,4,12,9,L:BOX 34,4,12,9,L:NEXT L
234 @(88)=-1:@(113)=-1
240 FOR L=1TO 75
250 N=RND (75):IF @(N)<0GOTO 250
260 @(N)=-1
262 CX=-72:CY=-32
264 IF N<16PRINT "#",#2,N," UNDER B",
266 IF N>15IF N<31PRINT "#",#2,N," UNDER I",
268 IF N>30IF N<46PRINT "#",#2,N," UNDER N",
270 IF N>45IF N<61PRINT "#",#2,N," UNDER G",
272 IF N>60PRINT "#",#2,N," UNDER O",
278 BOX 34,-32,70,10,2
280 IF KN(1)<0PRINT " NO? ",
290 IF KN(1)=0PRINT " YES?",
300 IF TR(1)=0GOTO 262
310 IF KN(1)<0GOTO 340
320 A=0:U=0:GOSUB 400
330 GOSUB 600
340 N=25:U=74:GOSUB 400
350 GOSUB 600
360 NEXT L
400 FOR S=75+ATO 100+A:IF @(S)=NGOTO 500
410 NEXT S

```

## BINGO (continued)

```

430 IF A=25RETURN
440 PRINT " NOPE",;RETURN
500 X=-66
510 FOR S=75+ATO 95+ASTEP 5
512 Y=24
520 FOR T=1TO 5
530 IF @(S+T)=N&(21)=255;BOX X+U,Y,12,9,3;@(S+T)=-1;&(21)=0;RETURN
540 Y=Y-10;NEXT T
550 X=X+13;NEXT S
560 RETURN
600 FOR S=76+ATO 96+ASTEP 5
610 IF @(S)=-1IF @(S+1)=-1IF @(S+2)=-1IF @(S+3)=-1IF @(S+4)=-1GOTO 800
620 NEXT S
630 FOR S=76+ATO 80+A
640 IF @(S)=-1IF @(S+5)=-1IF @(S+10)=-1IF @(S+15)=-1IF @(S+20)=-1GOTO 800
650 NEXT S
660 FOR S=76+ATO 100+ASTEP 6
670 IF @(S)*-1GOTO 700
680 NEXT S
690 GOTO 800
700 FOR S=80+ATO 96+ASTEP 4
710 IF @(S)*-1RETURN
720 NEXT S
800 CY=-40
810 FOR L=0TO 9
820 IF A=0CX=-72;PRINT "BINGO--YOU WIN",
830 IF A=25CX=8;PRINT "BINGO--I WIN",
840 NEXT L

```

# ARCADIAN

PROGRAM NAME HORSERACE

ISSUE Volume 3 page 26

AUTHOR

Paul Slezak  
1104 S. Neltner  
West Chicago, IL 60185

## DESCRIPTION

Eight horses are available to bet upon, using the keypad to enter your horse (B) and the value of your bet (C). The computer then randomly moves the horses across the screen and calculates the winnings.

1	X
2	X
3	F
4	I
5	I
6	S
7	H
8	X
	X

## LISTING

```

5 NT=0;CLEAR ;FC=155;BC=160;N=0;FOR Z=1TO 4;0(Z+Z0)=500;NEXT Z;0(9)=100
10 CY=S;PRINT "WELCOME TO ARLINGDUNG PARK";INPUT "0 OF PLAYERS? (1-4)"A;IF A>4
GOTO 10
15 GOSUB Z90
20 CLEAR ;CX=-Z0;PRINT "RACE 0",;PRINT 01,N;T=0;S=0;GOSUB 600
30 FOR Z=1TO 8;PRINT 0Z,Z,;0(Z+0)=RND (5)+RND (3)+1;CX=3B;PRINT 01,0(Z+0),;CX=
45;PRINT "1",;CX=-50;GOTO 30+Z
51 PRINT "ALBADEXTER";NEXT Z
52 PRINT "JO L IN";NEXT Z
53 PRINT "C BICUSPID";NEXT Z
54 PRINT "SEATTLE SLEWED";NEXT Z
55 PRINT "WOMAN O' WAR";NEXT Z
56 PRINT "DUSTY PAUL";NEXT Z
57 PRINT "DIABLO";NEXT Z
58 PRINT "SECRETARYLESS";NEXT Z
40 FOR Z=1TO A;IF 0(Z+Z0)=00(Z+16)=0;NEXT Z;GOTO 100
50 CY=-3Z;PRINT "PLAYER 0",;PRINT 01,Z,;CX=-Z0;INPUT B;CY=-3Z;CX=10;INPUT C
60 IF B>0IF B<10GOTO 80
70 GOTO 50
80 IF C>0(Z+Z0)CY=-3Z;PRINT "SORRY, I'M NO LOAN SHARK";GOSUB 610;CY=-3Z;FOR D=1
TO 23;PRINT " ",;NEXT D;CX=-7B;GOTO 50
90 0(Z+16)=B;0(Z+Z0)=0(Z+Z0)-C;0(Z+Z4)=C;NEXT Z
100 FC=160;NT=5;PRINT "146 641 641 641000000";CLEAR ;NT=0;FC=155;CY=35
110 FOR Z=1TO 10;CX=70;GOTO 110+Z
111 PRINT "X";NEXT Z
112 PRINT "X";NEXT Z
113 PRINT "F";NEXT Z
114 PRINT "I";NEXT Z
115 PRINT "N";NEXT Z
116 PRINT "I";NEXT Z
117 PRINT "S";NEXT Z
118 PRINT "H";NEXT Z
119 PRINT "X";NEXT Z
120 PRINT "X";NEXT Z
130 CY=Z5;FOR Z=1TO 8;PRINT 0Z,Z,;CX=-60;PRINT " ";NEXT Z;GOSUB 610
140 CY=Z5;FOR Z=1TO 8;CX=-60;PRINT " ";NEXT Z
150 NT=1;0(Z0)=50;0(Z1)=Z05;FOR Z=1TO 35;MU="U";NEXT Z;NT=0;0(Z0)=0;0(Z1)=0;CY=
Z5;FOR Z=1TO 8;PRINT " ";NEXT Z
155 CY=0;PRINT "AND THEY'RE OFF!!!";GOSUB 610;CY=0;PRINT " 19 SPACES "
160 GOSUB 610
170 CY=Z5;FOR Z=1TO 8;0(Z)=0(Z)+(RND (4)+B+RND (5))-(RND (0(Z+B))) ;CX=0(Z);PR
INT 01,Z;IF 0(Z)SS=1
175 NEXT Z;GOSUB 610
180 IF S=1GOTO Z00
190 CY=Z5;GOSUB 620;GOTO 160

```

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## HORSERACE (continued)

```

200 G=0;FOR Z=1TO 8;IF G>@(Z)NEXT Z;GOTO 220
210 X=Z;G=0(Z);M=0(Z+8);NEXT Z
220 B=0;FOR Z=1TO 8;IF 0(Z)>65B=B+1
230 NEXT Z;IF B>1GOSUB 500
240 CLEAR ;CY=0;PRINT "THE WINNER IS #";PRINT #2,X;GOSUB 610
250 FOR Z=1TO A;IF 0(Z+16)=X0(Z+20)=0(Z+24)bM+0(Z+20)
260 NEXT Z
290 CLEAR ;CX=-30;PRINT "YOU HAVE"
300 FOR Z=1TO A;PRINT "PLAYER #";PRINT #1,Z;PRINT #2," $";PRINT #2,0(Z+20);
    NEXT Z
310 FOR Z=1TO 3000;NEXT Z
320 IF N>BGOTO 400
330 N=N+1;IF N>0GOTO 20
340 RETURN
400 CLEAR ;FC=79;BC=82;CY=16;CX=-35;PRINT "RACES OVER!!";PRINT ;PRINT
410 PRINT "IF YOU WANT 9 MORE RACES    PRESS 1";A=KP;IF A#49STOP
420 GOTO 5
500 FOR Z=1TO 6;CLEAR ;FC=212;BC=209;CY=0;CX=-35;PRINT "PHOTO FINISH";NEXT Z;
    BC=160;FC=155
510 RETURN
600 FOR Z=1TO 8;0(Z)=-78;NEXT Z;RETURN
610 FOR F=1TO 300;NEXT F;RETURN
620 FOR D=1TO 8;CX=0(D);PRINT " ";NEXT D;RETURN
    
```



PROGRAM NAME: FIFTEEN

ISSUE: Volume 2 page 64

AUTHOR Bob Wiseman  
6594 Swartout Rd.  
Algonac, MI 48001

## DESCRIPTION-

A	C	G	Y	E
R	K	F	O	D
P	J	M	B	H
Q	L	S	T	
U	W	X	N	V

Based on the familiar 15 puzzle, this version uses letters. They are randomly placed by the computer, and you use the joystick to move the letters into the empty space, in order to place them all in alphabetical order.

## LISTING-

```
10 FC=11;U=400;CLEAR
12 NT=1
15 BOX -2,0,75,75,1
16 BOX -2,0,73,73,3
20 E=0;A=25
30 FOR Y=1TO 24
31 @(Y)=Y+64
35 GOSUB 400;NEXT Y
40 @(25)=32;GOSUB 400
50 IF TR(1)=1U=1
60 IF E=0B=NRND (4);GOTO 100
70 I=JX(1);J=JY(1)
80 IF I=0IF J=0GOTO 70
90 IF IIF JGOTO 70
91 B=0
92 IF J B=J+2
94 IF I B=3-I
100 X=A-A*5*5
110 IF B=2IF X=1GOTO 300
120 IF B=4IF X=0GOTO 300
130 IF B=3IF A>20GOTO 300
140 IF B=1IF A<6GOTO 300
150 IF B=1D=A-5
160 IF B=2D=A-1
170 IF B=3D=A+5
180 IF B=4D=A+1
190 X= @(D);@(D)=32;@(A)=X
192 IF E=1GOTO 200
195 U=U-1;A=D
194 IF U<200FOR Y=1TO 25;GOSUB 400;NEXT Y;E=1;GOTO 50
196 GOTO 50
200 Y=D;GOSUB 400
210 Y=A;GOSUB 400
220 A=D
221 IF U=0GOTO 50
222 U=0
225 Y=0
230 FOR X=1TO 25
235 IF X=AGOTO 250
240 IF @(X)<YGOTO 50
245 Y= @(X)
250 NEXT X
260 FOR X=1TO 25
270 MU=X;NEXT X
280 GOTO 10
300 IF E=0GOTO 50
302 FOR X=1TO 5
304 MU=X;NEXT X
310 GOTO 50
400 MU= @(Y)
405 Z=Y-1
410 CX=-30+(Z-Z*5*5)*13
420 CY=30-Z*5*14
430 TU= @(Y)
440 RETURN
```

# ARCADIAN

## LOGO

PROGRAM NAME

AUTHOR

Guy McLimore

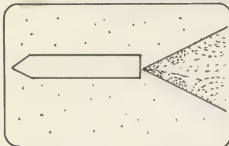
ABC Hobbycraft

2155 E. Morgan Ave.

Evansville, IN 47711

DESCRIPTION:

ISSUE Vol 2 Page 3



This is a graphics program that projects a random star field on the screen, then prints a word. A tail erupts from the end of the word, which in turn becomes surrounded by a rocket. We use this as the logotype for the Newsletter.

LISTING:

```

10 CLEAR
20 &(9)=37
30 BC=250;FC=7
40 FOR A=1 TO 150
50 H=RND (160)-80;V=RND (88)-44
60 BOX H,V,1,1,RND (2)
70 NEXT A
80 &(9)=85;&(1)=250
90 &(2)=108;&(11)=250
100 CX=-44;CY=0
110 PRINT "ARCADIAN
120 LINE 0,0,4
130 FOR Q=0 TO 35 STEP 2
140 LINE 75,0,3;LINE 0,0,4
150 LINE 75,-Q,3;LINE 0,0,4
160 NEXT Q
170 L=7;FOR Z=48 TO 51
180 BOX -Z,0,1,L,1
190 L=L-2
200 NEXT Z
210 BOX -22,0,50,9,3
220 FOR Q=0 TO 35
230 LINE 75,0,3;LINE 0,0,4
240 LINE 75,-Q,3;LINE 0,0,4
250 NEXT Q
260 GOTO 220

```

# ARCADIAN

PROGRAM NAME

MICROTREK

ISSUE Volume 1, page 89; V2p4

AUTHOR

Bill Andrus  
7834 Thomas Dr.  
North Highlands, CA 95668

## DESCRIPTION

A small version of Star Trek. The Space is an 8x8 quadrant of 64 Sectors. You can move to any legal, unoccupied sector. If you are adjacent to a Star Base, you are docked and restoring energy. The Commands are:

- 1: Move to Sector (row,column) If either command is zero, the command is cancelled
- 2: Move to a new Quadrant, extending your search for Klingons and Star Bases.
- 3: fire on Sector (row,column) - watch your energy
- 4: Sensor report - \* are Stars K is Klingons E is Enterprise B is Star Base S: Status report - gives display

```

  1 2 3 4 5 6 7 8
1 * * * * *
2 * * * * * K *
3 * * * * * *
4 * * * * * *
5 * * E * * *
6 * * * * * K *
7 * * * * * *
8 * * K * * *
1 2 3 4 5 6 7 8

```

COMMAND:

## LISTING

```

38 CLEAR :NT=0
40 D=RND (40);IF D<36GOTO 48
50 W=RND (35);IF W<16GOTO 58
60 D=(D*W)+28;L=10000
70 PRINT " *MICROTREK*
100 A=0;K=0;S=10;T=10
110 FOR I=1TO 64:0(I)=0
120 X=RND (12);IF X>2 0(I)=1
130 IF X=3 IF K=0 0(I)=2;K=1
140 NEXT I
150 X=RND (64);IF 0(X)=1 GOTO 150
160 0(X)=3;GOSUB 850;B=RND (17);IF B>5 GOTO 200
170 X=RND (64);IF 0(X)=1GOTO 170
180 0(X)=4;S=X-1+B;T=X-S*8
200 CLEAR :C=E-S;IF C<0C=-C
210 G=F-T;IF G<0 G=-G
220 0=0;IF C<2 IF G<2 Q=1
230 D=D-1;IF D=0 GOTO 970
240 IF (K=0)+(Q=1) GOTO 270
250 GOSUB 860;PRINT #4,H,"UNIT HIT FROM"
260 PRINT "KLINGONS!"
270 IF Q=1 L=10000
280 INPUT "COMMAND: "A
290 IF A=1 GOTO 350
300 IF A=2 GOTO 400
310 IF A=3 GOTO 450
320 IF A=4 GOTO 550
330 IF A=5 GOTO 650
340 GOTO 200
350 GOSUB 920;X=(Y-1)*8+Z;IF 0(X)=1 PRINT "SECTOR OCCUPIED";GOTO 350
360 U=1;GOSUB 870;0(X)=3;0(E*B+F)=1;GOSUB 850;GOTO 200
400 G=RND (250)+300;U=1;GOSUB 900;GOTO 100
450 GOSUB 920;U=2;GOSUB 870;X=(Y-1)*8+Z;U=0(X);IF U<2 GOTO 230
460 IF U=3 PRINT "YOU DESTROYED YOURSELF!!";GOTO 990
470 IF U=4 PRINT "STARBASE DESTROYED!!";S=10;T=10;GOTO 200
480 IF R>500 IF (RND (R+500)+6)>10 PRINT "YOU MISSED!";GOTO 230
490 0(X)=1;K=K-1;W=W-1;IF W=0 GOTO 230
500 PRINT "MISSION ACCOMPLISHED!!";GOTO 990
550 CLEAR :GOSUB 630
560 FOR I=1TO 8:PRINT #1,I;FOR J=1TO 8
570 X=0((I-1)*8+J);IF X=0 PRINT " * ",
580 IF X=1 PRINT " . ",
590 IF X=2 PRINT " K ",
600 IF X=3 PRINT " E ",
610 IF X=4 PRINT " B ",

```

# ARCADIAN

PROGRAM NAME

NICHOMACHUS

AUTHOR: Hank Chiuppi

275 St. Mary's

Buffalo Grove, IL 60090

DESCRIPTION:

Volume 2 page 72

HELLO! I AM THE BALLY  
COMPUTER.  
HOW MANY LETTERS IN  
YOUR NAME?

The computer attempts to guess a number you have chosen by asking three questions. The player has to do some arithmetic to supply the answers.

LISTING:

```

10 CLEAR
20 PRINT "HELLO! I AM THE BALLY      COMPUTER.
30 INPUT " HOW MANY LETTERS IN YOUR NAME?"L
40 IF L<5PRINT "MY, YOU HAVE A VERY SHORT NAME!"
50 IF L>15PRINT "WOW! YOU HAVE A VERY LONG NAME!"
60 PRINT " BY THE WAY, WHAT IS YOUR  NAME?"
70 FOR A=1TO L;B=KP;@(A)=B
80 NEXT A
90 PRINT "HELLO!";GOSUB 1000
100 GOSUB 2000
110 PRINT " --OOPS! SORRY";PRINT "ABOUT THAT.
120 GOSUB 2000
130 PRINT "HELLO!";GOSUB 3000
140 GOSUB 2000
150 PRINT " --THAT'S BETTER.
160 INPUT "WOULD YOU LIKE TO PLAY A GAME? (1=YES 2=NO)"G
170 IF G=1GOTO 200
180 PRINT "IT WAS NICE MEETING YOU";GOSUB 1000
190 STOP
200 PRINT "OK ";GOSUB 3000
210 PRINT " --PICK A NUMBER";PRINT "BETWEEN 7 AND 100";PRINT "DON'T TELL ME
    WHAT IT IS.
220 GOSUB 2000
230 INPUT "YOUR # +3 HAS A REMAINDER    OF?"Q
240 INPUT "YOUR # +5 HAS A REMAINDER    OF?"R
250 INPUT "YOUR # +7 HAS A REMAINDER    OF?"S
255 D=0
260 D=(70*Q)+(21*R)+(15*S)
270 IF D<105GOTO 300
280 D=D-105
290 GOTO 270
300 PRINT "YOUR # IS ",D;PRINT "RIGHT?
310 INPUT "(1=YES 2=NO)"X
320 IF X=1GOTO 340
330 PRINT "I THINK YOUR ARITHMETIC    IS IN ERROR!!
340 PRINT "WANT TO TRY AGAIN?";GOSUB 3000
350 INPUT "(1=YES 2=NO)"Y
360 IF Y=1GOTO 200
370 GOTO 180
1000 FOR C=LTO 1STEP -1
1010 TV=@(C)
1020 NEXT C
1030 RETURN
2000 FOR T=1TO 2000
2010 NEXT T
2020 RETURN
3000 FOR C=1TO L;TV=@(C)
3010 NEXT C
3020 RETURN

```

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# ARCADIAN

PROGRAM NAME REVERSE

AUTHOR Brett Bilbrey & Mike Toth  
14430 Barclay  
Dearborn, MI 48126

DESCRIPTION:

Volume 1 page 38, 40

74


6159328

REVERSE DIGITS 1 THRU ☐

Nine numbers are randomly placed in a line. The object is to arrange them in numerical order (smallest to the left). The knob of hand controller (1) is used to indicate how many numbers will be moved, and the trigger used to make the move.

LISTING:

```

9 NT=9
10 N=9;CLEAR
20 @(1)=RND (9)
30 FOR K=2TO N
40 @(K)=RND (9)
50 FOR J=1TO K-1
60 IF @(K)=@(J)GOTO 40
70 NEXT J;NEXT K
80 CY=25
90 PRINT "THE LIST IS"
100 T=0
110 GOSUB 280
120 CY=-20;CX=0;Q=0;NT=0
130 O=KN(1)/32+6;IF TR(1)=1GOTO 160
135 CY=-33
140 IF O#Q CX=-77;PRINT "REVERSE DIGITS 1 THRU ",#1,0;Q=0
150 GOTO 130
160 T=T+1
170 FOR K=1TO Q/2
180 Z= @(K)
190 @(K)=@(Q-K+1)
200 @(Q-K+1)=Z
210 NEXT K
220 GOSUB 280
230 FOR K=1TO 9;IF @(K)#KGOTO 120
240 NEXT K
250 CX=-70
255 CLEAR
260 CY=0;PRINT " YOU WON IN ";TV=T+10+48;TV=T+10+10+48;PRINT " MOVES"
265 PRINT " PULL TR(1) TO  14 sp.  PLAY AGAIN"
270 IF TR(1)#1GOTO 270
275 GOTO 10
280 CX=-5;CY=0
290 FOR B=1TO N;TV=48+@(B);TV=32;NEXT B
300 RETURN

```

PROGRAM NAME: SPIRALS II

AUTHOR: Matt Giwer  
3922 Millcreek Dr.  
Annandale, VA 22003

DESCRIPTION:

Volume 2 page 95



This is an artistic exercise that draws patterns on the screen, using a diamond motif as generated by a line following a spiral path around the center.

LISTING:

```
10 CLEAR
100 A=3
200 B=RND (2)
210 C=RND (2)
800 X=B;Y=0
850 FOR D=1TO 100
900 X=X+B
905 Y=Y+C
907 IF X>75GOTO 100
908 IF Y>45GOTO 100
910 GOSUB 1050
950 NEXT D
990 GOTO 10
1050 .M
1060 LINE X,0,A
1070 LINE 0,-Y,A
1090 LINE -X,0,A
1110 LINE 0,Y,A
1200 RETURN
```



ARCADIAN SAMPLER PROGRAMS, as included herein, are also available on a single tape. It can be purchased in either the ARCADE Plus format (where the cassette interface is on the Basic cartridge), or in the Bally Basic format (where there is a separate cassette interface). Either cartridge is \$7.50

OTHER DOCUMENTATION available includes the disassembled listings of the Basic languages. Advanced hackers will find these of value in developing more complex programs. The Bally Basic listing is \$6.50, while the new Arcade Plus listing is \$7.50.

TAPED PROGRAMS are also available of other programs that have appeared in the ARCADIAN. We have tapes of the "BEST OF ARCADIAN" for 1979, 1980, and 1981. Inquire as to contents and prices.

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San Jose, CA 95127-9990

408-272-1060  
The SOURCE TCD959

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```
FOR A = 0 TO 180; &(10)=A; NEXT A
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&(9) is a command that gives you control over the ability to divide the screen vertically. Try the same program as above, only replace &(10)=A with &(9)=A. Then try adding this command at the beginning: &(0)=172; &(11)=126; &(2)=82 for a colorful surprise. These are described in Vol. 1 pages 15, 40.

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WELCOME TO THE FASCINATING WORLD OF ARCADE PROGRAMMING!

The enclosed programs were selected to help you enjoy your Arcade-Plus game unit, and were originally published in the ARCADIAN. If you review the programs included here against their listing in the ARCADIAN, you will find that we have made some procedural changes in order to be compatible with your new Basic cartridge. These programs are presented as "listings" - all the instructions necessary for the computer to operate, in a standardized format that the computer understands.

These programs have all been checked for operation and you should have no problem with them. Read the Manual that came with the Basic in case you have difficulty - and here are a couple of Instructions that are useful for any program you wish to enter.

1. Make NO modifications.

2. It is implied that every line ends with a 'WORDS GO' entry, that is equivalent to a typewriter's carriage return. Up to this point, you could make changes, correct errors, etc., because the work you were doing was being temporarily stored in a "keypad buffer". Once you press the 'WORDS GO' sequence, that work is transferred to the computer and the keyboard buffer is ready for another line of input.

3. Punctuation marks have a different meaning to the computer. Do not substitute, add, or delete any.

4. After the last line entry, type in "WORDS RUN GO" to get the program into operation.

5. If the computer has a problem and questions your instruction, the instruction will be listed with a question mark at the problem area. First 'LIST' the line in question (for example, if the computer prints line 140 on the screen, enter "LIST 140, 1 WORDS GO". This will list only line 140, just as it was entered.) and see that it is exactly as you wanted it, especially in the area where the question mark was. Next, make sure that the computer can do what you want it to - is it supposed to go to a subroutine that isn't there? or use a variable that has not been entered? are there enough terms for a LINE or BOX command? etc.

6. If the problem is unsolvable, list the program to a tape, send it to us, and we'll return a "fixed" program to you.

7. Once the program is running, you can store it on tape for your future use. And after it is stored, you can start to manipulate the program in the computer and make whatever modifications you might wish.

All programs are available on a single tape, at \$7.50 postpaid.

ARCADIAN Newsletter

## PROGRAM NAME BAGELS

ISSUE Volume 2 page 25

### AUTHOR

Carl Morimoto  
4803 Hamilton Park Dr.  
San Jose, CA 95130

```
>371 BAGELS
>214 PICO
>124 FERMI
>526 FERMI
>□
```

### DESCRIPTION

The computer picks a three-digit number (no duplicate digits) that you have to guess. Each time that you make a three-figure guess, the computer responds with one of the following:

BAGELS no digit is correct  
PICO one correct digit in the wrong place  
PICO-PICO two or more correct digits in the wrong place  
FERMI one correct digit in the right place  
FERMI-PICO one correct digit in the right place, and one or more correct digits in the wrong place  
FERMI-FERMI two or more correct digits in the right place

### LISTING

```
50 CLEAR :NT=0:FC=66:BC=7
50 Z=300
70 O=0:W=0:D=0:C=0:U=0:F=0
100 BOX 5,-5,80,50,1:BOX 5,-5,78,48,3
110 CX=-40:CY=20:PRINT "BAGELS"
120 BOX -26,20,49,11,3
130 NT=5:FOR A=1 TO 15
140 CX=RND (3)*20-40:CY=RND (5)*8-30
150 FOR B=1 TO 3:TU=47+RND (10):NEXT B:NEXT A
160 NT=0:FC=252
170 CX=25:CY=-39:PRINT "PRESS GO",
175 BOX 63,-39,13,9,3
180 A=RND (10)
190 IF A(23)=0 GOTO 180
200 (4)=RND (10)-1:(7)=0(4)
210 (5)=RND (10)-1
220 IF (4)=0(5) GOTO 210
230 (8)=0(5)
240 (6)=RND (10)-1
250 IF (0(5)=0(4))+0(6)=0(5) GOTO 240
260 CLEAR :G=0:O=0+1:FC=7:BC=243
270 CY=40:PRINT " GAME",03,0
280 IF U CX=0:CY=40:PRINT "AVERAGE",03,U,".",01,F
300 NT=0:CY=-77:PRINT "
310 NT=1:CY=-77:PRINT 02,G+1,"> ",
320 FOR A=1 TO 3
330 X=KP:IF X=31 GOTO 2
340 TU=X
350 IF (CX-40)-(X-57) GOTO 900
360 (A)=X-40:NEXT A
370 IF (0(1)+0(2)+0(3)=0 GOTO 750
380 IF (0(1)=0(2))+0(1)=0(3))+0(2)=0(3) GOTO 910
500 G=4+1:P=0
510 FOR A=1 TO 3
520 IF (0(A)=0(A+3))P=P+4
530 IF (0(A)=0(A+4))P=P+1
540 IF (0(A)=0(A+5))P=P+1
550 NEXT A
```

```
510 IF P=0 PRINT " BAGELS":GOTO 2
620 IF P=1 PRINT " PICO":GOTO 2
630 IF P=3 PRINT " PICO-PICO":GOTO 2
640 IF P=4 PRINT " FERMI":GOTO 2
650 IF P=7 PRINT " FERMI-PICO":GOTO 2
660 PRINT " FERMI-FERMI"
670 PRINT " GAME GUESS? ",A=KP
680 IF A=13 GOTO 780
690 PRINT "NO",:NT=38:MU=28:MU=18:MU=18:GOTO 2
700 CX=CX-12:PRINT " ":PRINT :IF 012 GOTO 740
710 PRINT "YOU GOT IT":W=W+1:BC=155
720 NT=8:A=48:MU=99:MU=53:MU=A:MU=48:MU=A:MU=A:MU=A
730 MU=58:MU=49:MU=58:MU=51:MU=A:MU=51:MU=A:MU=51:MU=A:
GOTO 790
740 PRINT "SORRY, WRONG NUMBER":D=D+1:BC=66:GOTO 760
750 PRINT :PRINT :PRINT "GAME UP":BC=123
760 PRINT "CORRECT NUMBER WAS ",01,0(4),0(5),0(6)
```

```
770 NT=10:MU=51:MU=45:MU=51:MU=51:MU=45:MU=51:MU=51
780 MU=99:MU=55:MU=50:MU=49:MU=99:MU=54:MU=48:MU=48
790 NT=0
800 C=C+G:IF W=0 GOTO 800
810 U=C-W:F=(R(10)-W)
820 PRINT "STAT. AFTER GAME 0",02,0
830 PRINT " 0 GAMES WON ....",02,W
840 PRINT " 0 GAMES LOST ....",02,D
850 PRINT " AVE 0 GUESSES....",02,U,".",01,F
860 GOTO 180
900 PRINT " INPUT ERROR":GOTO 920
910 PRINT " DUPLICATE DIGITS",
920 NT=5:FOR A=1 TO 10:MU=87:MU=84:NEXT A
930 GOTO 2
```

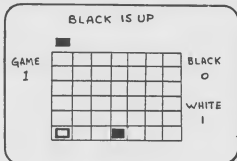
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PROGRAM NAME: CONNECT FOUR

ISSUE: Volume 2 page 35

AUTHOR

Larry Connitz  
2106 Hastings St.  
Orlando, FL 32088



## DESCRIPTION-

The object is to get four squares in a row while preventing your opponent from doing the same. Use hand controllers (1) and (2). When four squares are lined up, move the joystick sideways to register the win.

## LISTING-

```

10 BC=126
20 FC=0
30 NT=0
900 P=1:L=1:M=0:N=0
950 CLEAR:GOSUB 3000
960 CLEAR
1000 BOX -4,-36,118,10,2
1002 CX=-70:CY=20:PRINT "GAME",
1004 CX=45:CY=20:PRINT "BLACK",
1005 CX=50:CY=-20:PRINT "O,M",
1006 CX=45:CY=-10:PRINT "WHITE",
1007 CX=50:CY=10:PRINT "O,L",
1008 CX=-64:CY=10:PRINT "O,L",
1010 BOX -4,-3,87,56,1
1020 FOR B=-40TO 32STEP 12
1030 FOR C=20TO -25STEP -9
1040 BOX B,C,11,8,2
1050 NEXT C
1060 NEXT B
1070 X=-40
1080 D=-34:E=-34:F=-34:G=-34:H=-34:I=-34:J=-34
1100 CY=40:IF P=1:PRINT "←7→BLACK IS UP":GOTO 1600
1110 CY=40:IF P=2:PRINT "      WHITE IS UP":GOTO 1600
1200 IF TR(1)=1GOTO 2000
1210 IF JX(1)=1GOTO 1500
1220 IF JX(1)=-1GOTO 1510
1230 IF JY(2)=1GOTO 3500
1240 GOTO 1200
1400 IF TR(2)=1GOTO 2000
1405 IF J(22)=1GOTO 900
1410 IF JX(2)=1GOTO 1500
1420 IF JX(2)=-1GOTO 1510
1430 IF JY(1)=1GOTO 3500
1440 GOTO 1400
1500 X=X+12:GOTO 1600
1510 X=X-12:GOTO 1600
1600 IF X<-40X=-40
1610 IF X>32X=32
1620 BOX -4,30,100,6,2
1700 BOX X,30,9,6,1
1705 IF P=2BOX X,30,5,4,2
1706 NT=1
1710 MU="Y":MU="Z"
1711 NT=0
1720 IF P=1GOTO 1200
1730 IF P=2GOTO 1400
2000 IF X=-40D=D+9:GOTO 2200
2010 IF X=-28E=E+9:GOTO 2300
2020 IF X=-16F=F+9:GOTO 2400
2030 IF X=-4G=G+9:GOTO 2500
2040 IF X=8H=H+9:GOTO 2600
2050 IF X=20I=I+9:GOTO 2700
2060 IF X=32J=J+9:GOTO 2800
2200 BOX X,D,9,6,1
2210 IF P=2BOX X,D,5,4,2:P=1:GOTO 1100
2220 P=2:GOTO 1100
2300 BOX X,E,9,6,1
2310 IF P=2BOX X,E,5,4,2:P=1:GOTO 1100
2320 P=2:GOTO 1100
2400 BOX X,F,9,6,1
2410 IF P=2BOX X,F,5,4,2:P=1:GOTO 1100
2420 P=2:GOTO 1100
2500 BOX X,G,9,6,1
2510 IF P=2BOX X,G,5,4,2:P=1:GOTO 1100
2520 P=2:GOTO 1100
2600 BOX X,H,9,6,1
2610 IF P=2BOX X,H,5,4,2:P=1:GOTO 1100
2620 P=2:GOTO 1100
2700 BOX X,I,9,6,1
2710 IF P=2BOX X,I,5,4,2:P=1:GOTO 1100
2720 P=2:GOTO 1100
2800 BOX X,J,9,6,1
2810 IF P=2BOX X,J,5,4,2:P=1:GOTO 1100
2820 P=2:GOTO 1100
3000 CY=20:PRINT "←6→CONNECT FOUR",
3010 PRINT "      NUMBER OF GAMES?"K
3020 RETURN
3500 CX=-56:CY=-38:PRINT "WHITE CONNECTS FOUR",
3510 M=M+1:CY=58:CY=-20:PRINT "O,M",
3515 L=L+1
3520 IF L=1KGOTO 4500
3530 IF TR(2)=1GOTO 1000
3540 GOTO 3530
3600 CX=-56:CY=-38:PRINT "BLACK CONNECTS FOUR",
3610 N=N+1:CY=58:CY=10:PRINT "O,N",
3615 L=L+1
3620 IF L=1KGOTO 4500
3630 IF TR(1)=1GOTO 1000
3640 GOTO 3630
4500 CY=40:PRINT "←1F→GAME OVER",
4510 IF J(22)=1GOTO 900
4520 GOTO 4510

```

←N→ INDICATES  
"LEAVE  
N  
SPACES"

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PROGRAM NAME BINGO

ISSUE

Volume 2 page 34

AUTHOR

Ernie Same  
248 S. Forest St.  
Bellingham, WA 98225

## DESCRIPTION

B	I	N	G	O	B	I	N	G	O
8	23	34	54	62	5	27	45	60	69
10	27	42	50	75	11	19	34	54	67
6	26	H	52	65	14	20	C	58	63
15	16	40	53	63	12	30	44	57	68
11	29	36	60	72	4	24	40	53	64

\*75 UNDER O ☒

The computer plays against you, with one Bingo card each. The computer randomly draws numbers and displays them on the screen. Turn the knob to indicate whether you have the number (yes/no) and pull the trigger to register. The computer then checks its card.

## LISTING

```

30 CLEAR :NT=1:FC=179:&(23)=255
40 &(9)=84:&(8)=7:&(1)=7:&(2)=88:&(3)=88
50 BOX -40,9,68,65,1:BOX -40,4,64,49,2
60 BOX 34,9,68,65,1:BOX 34,4,64,49,2
70 CX=-64:CY=36:PRINT "B I N G O":CX=10:PRINT "B I N G O",
80 FOR L=-60TO -21STEP 13:BOX L,10,1,64,1:BOX L+74,10,1,64,1:NEXT L
90 FOR L=-11TO 19STEP 10:BOX -40,L,68,1,1:BOX 34,L,68,1,1:NEXT L
100 C=0:D=0:X=-69:Y=34
110 FOR L=1TO 125:O(L)=0:NEXT L
120 FOR L=75TO 95STEP 5
130 FOR M=1TO 5
140 N=RND (15)+C
150 IF (O(L+1)=N)+(O(L+2)=N)+(O(L+3)=N)+(O(L+4)=N)+(O(L+5)=N)GOTO 140
160 O(L+M)=N
170 CX=X:CY=Y+(-M*10):PRINT O2,N,
180 N=RND (15)+C
190 IF (O(L+26)=N)+(O(L+27)=N)+(O(L+28)=N)+(O(L+29)=N)+(O(L+30)=N)GOTO 180
195 O(L+25+M)=N
200 CX=X+74:CY=Y+(-M*10):PRINT O2,N,
210 NEXT M
220 C=C+15:X=X+13
230 NEXT L
232 FOR L=1TO 3:CY=C:CX=-48:PRINT "H":CX=34:PRINT "C",
233 BOX -40,4,12,9,1:BOX 34,4,12,9,1:NEXT L
234 O(88)=1:O(113)=-1
240 FOR L=1TO 75
250 N=RND (75):IF O(N)OGOTO 250
260 O(N)=-1
262 CX=-72:CY=-32
264 IF N<16PRINT "O ",O2,N," UNDER B",
266 IF N<31PRINT "O ",O2,N," UNDER I",
268 IF N<38IF N<46PRINT "O ",O2,N," UNDER N",
270 IF N<45IF N<61PRINT "O ",O2,N," UNDER G",
272 IF N<68PRINT "O ",O2,N," UNDER O",
276 BOX 34,-32,70,10,2
280 IF KN(1)OPRINT " NO? ",
290 IF KN(1)=0PRINT " YES?",
300 IF TR(1)=0GOTO 262
310 IF KN(1)O GOTO 340
320 A=0:U=0:GOSUB 400
330 GOSUB 600
340 A=25:U=74:GOSUB 400
350 GOSUB 600
360 NEXT L
400 FOR S=76+ATO 100+A:IF O(S)=NGOTO 500
410 NEXT S

```

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# ARCADIAN



## BINGO (continued)

```

430 IF A=25RETURN
440 PRINT " NOPE",;RETURN
500 X=-66
510 FOR S=75+ATO 95+ASTEP 5
512 Y=24
520 FOR T=1TO 5
530 IF @(S+T)=N&(21)=255;BOX X+U,Y,12,9,3;@(S+T)=-1;&(21)=0;RETURN
540 Y=Y-10;NEXT T
550 X=X+13;NEXT S
560 RETURN
600 FOR S=76+ATO 96+ASTEP 5
610 IF @(S)=-1IF @(S+1)=-1IF @(S+2)=-1IF @(S+3)=-1IF @(S+4)=-1GOTO 800
620 NEXT S
630 FOR S=76+ATO 80+A
640 IF @(S)=-1IF @(S+5)=-1IF @(S+10)=-1IF @(S+15)=-1IF @(S+20)=-1GOTO 800
650 NEXT S
660 FOR S=76+ATO 100+ASTEP 6
670 IF @(S)*-1GOTO 700
680 NEXT S
690 GOTO 800
700 FOR S=80+ATO 96+ASTEP 4
710 IF @(S)*-1RETURN
720 NEXT S
800 CY=-40
810 FOR L=0TO 9
820 IF A=0CX=-72;PRINT "BINGO--YOU WIN",
830 IF A=25CX=8;PRINT "BINGO--I WIN",
840 NEXT L

```

# ARCADIAN

PROGRAM NAME HORSERACE

ISSUE Volume 3 page 26

AUTHOR

Paul Slezak  
1104 S. Naitnor  
West Chicago, IL 60185

## DESCRIPTION

Eight horses are available to bet upon, using the keypad to enter your horse (B) and the value of your bet (C). The computer then randomly moves the horses across the screen and calculates the winnings.

1	X
2	X
3	F
4	I
5	N
6	I
7	S
8	H
	X
	X

## LISTING

```

S NT=0;CLEAR IFC=155;BC=160;N=0;FOR Z=1TO 4;0(Z+20)=500;NEXT Z;0(9)=160
10 CY=5;PRINT "WELCOME TO ARLINGDUNG PARK";INPUT "0 OF PLAYERS? (1-4)"A;IF A>4
GOTO 10
15 GOSUB 290
20 CLEAR I;CX=-20;PRINT "RACE 0",I;PRINT 0,1,N;T=0;S=0;GOSUB 600
30 FOR Z=1TO 8;PRINT 0Z,Z;0(Z+8)=RND (5)+RND (3)+1;CX=30;PRINT 0,1,0(Z+8),CX-
45;PRINT "1",CX=-50;GOTO 30+Z
31 PRINT "ALBADEXTER";NEXT Z
32 PRINT "JO L IN";NEXT Z
33 PRINT "C BICUSPID";NEXT Z
34 PRINT "SEATTLE SLEWED";NEXT Z
35 PRINT "WOMAN O' WAR";NEXT Z
36 PRINT "DUSTY PAUL";NEXT Z
37 PRINT "DIABLO";NEXT Z
38 PRINT "SECRETARYLESS";NEXT Z
40 FOR Z=1TO 4;IF 0(Z+20)=00(Z+15)=0;NEXT Z;GOTO 100
50 CY=-32;PRINT "PLAYER 0",I;PRINT 0,1,Z;CX=-20;INPUT B;CY=-32;CX=10;INPUT C
60 IF B>0IF B<10GOTO 80
70 GOTO 50
80 IF C>0(Z+20)CY=-32;PRINT "SORRY, I'M NO LOAN SHARK";GOSUB 610;CY=-32;FOR D=1
TO 23;PRINT " ",NEXT D;CX=-70;GOTO 50
90 0(Z+16)=B;0(Z+20)=0(Z+20)-C;0(Z+24)=C;NEXT Z
100 FC=160;NT=5;PRINT "146 641 641 641000000";CLEAR I;NT=0;FC=155;CY=35
110 FOR Z=1TO 10;CX=70;GOTO 110+Z
111 PRINT "X";NEXT Z
112 PRINT "X";NEXT Z
113 PRINT "F";NEXT Z
114 PRINT "I";NEXT Z
115 PRINT "N";NEXT Z
116 PRINT "I";NEXT Z
117 PRINT "S";NEXT Z
118 PRINT "H";NEXT Z
119 PRINT "X";NEXT Z
120 PRINT "X";NEXT Z
130 CY=25;FOR Z=1TO 8;PRINT 0Z,Z;CX=-60;PRINT " ";NEXT Z;GOSUB 610
140 CY=25;FOR Z=1TO 8;CX=-60;PRINT " ";NEXT Z
150 NT=1;0(20)=50;0(21)=205;FOR Z=1TO 35;MU="U";NEXT Z;NT=0;0(20)=0;0(21)=0;CY=
25;FOR Z=1TO 8;PRINT " ";NEXT Z
155 CY=0;PRINT ".AND THEY'RE OFF!!";GOSUB 610;CY=0;PRINT " 19 SPACES "
160 GOSUB 610
170 CY=25;FOR Z=1TO 8;0(Z)=0(Z)+((RND (4)+B+RND (5))-(RND (0(Z+8)))));CX=0(Z);PR
INT 0,1,Z;IF 0(Z)555=1
175 NEXT Z;GOSUB 610
180 IF 5=1GOTO 200
190 CY=25;GOSUB 620;GOTO 160

```

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# ARCADIAN

## HORSERACE (continued)

```

200 G=0;FOR Z=1TO 8;IF G>0(Z)NEXT Z;GOTO 220
210 X=Z;G=0(Z);M=0(Z+8);NEXT Z
220 B=0;FOR Z=1TO 8;IF 0(Z)>65B=B+1
230 NEXT Z;IF B>1GOSUB 500
240 CLEAR ;CY=0;PRINT "THE WINNER IS #";PRINT #2,X;GOSUB 610
250 FOR Z=1TO 8;IF 0(Z+16)=X0(Z+20)=0(Z+24)bM+0(Z+20)
260 NEXT Z
290 CLEAR ;CX=-30;PRINT "YOU HAVE"
300 FOR Z=1TO 8;PRINT "PLAYER #";PRINT #1,Z;PRINT #2," $";PRINT #2,0(Z+20);
    NEXT Z
310 FOR Z=1TO 3000;NEXT Z
320 IF N>8GOTO 400
330 N=N+1;IF N>0GOTO 20
340 RETURN
400 CLEAR ;FC=79;BC=82;CY=16;CX=-35;PRINT "RACES OVER!!";PRINT ;PRINT
410 PRINT "IF YOU WANT 9 MORE RACES    PRESS 1";A=KP;IF A#49STOP
420 GOTO 5
500 FOR Z=1TO 6;CLEAR ;FC=212;BC=209;CY=0;CX=-35;PRINT "PHOTO FINISH";NEXT Z;
    BC =160;FC=155
510 RETURN
600 FOR Z=1TO 8;0(Z)=-78;NEXT Z;RETURN
610 FOR F=1TO 300;NEXT F;RETURN
620 FOR D=1TO 8;CX=0(D);PRINT " ";NEXT D;RETURN

```

# ARCADIAN

PROGRAM NAME: FIFTEEN

ISSUE: Volume 2 page 64

AUTHOR

Bob Wiseman  
6594 Swartout Rd.  
Algonac, MI 48001

## DESCRIPTION-

A	C	G	Y	E
R	K	F	O	D
P	J	M	B	H
Q	L	S	T	
U	W	X	N	V

Based on the familiar 15 puzzle, this version uses letters. They are randomly placed by the computer, and you use the joystick to move the letters into the empty space, in order to place them all in alphabetical order.

## LISTING-

```

10 FC=11;U=400;CLEAR
12 NT=1
15 BOX -2,0,75,75,1
16 BOX -2,0,73,73,3
20 E=0;A=25
30 FOR Y=1TO 24
31 @Y=Y+64
35 GOSUB 400;NEXT Y
40 @(25)=32;GOSUB 400
50 IF TR(1)=1U=1
60 IF E=0B=RND(4);GOTO 100
70 I=JX(1);J=JY(1)
80 IF I=0IF J=0GOTO 70
90 IF IIF JGOTO 70
91 B=0
92 IF J B=J+2
94 IF I B=3-I
100 X=A-A+5
110 IF B=2IF X=1GOTO 300
120 IF B=4IF X=0GOTO 300
130 IF B=3IF A>20GOTO 300
140 IF B=1IF A<5GOTO 300
150 IF B=1D=A-5
160 IF B=2D=A-1
170 IF B=3D=A+5
180 IF B=4D=A+1
190 X=@(D);@(D)=32;@(A)=X
192 IF E=1GOTO 200
193 U=U-1;A=D
194 IF U<200FOR Y=1TO 25;GOSUB 400;NEXT Y;E=1;GOTO 50
195 GOTO 50
200 Y=D;GOSUB 400
210 Y=A;GOSUB 400
220 A=D
221 IF U=0GOTO 50
222 U=0
225 Y=0
230 FOR X=1TO 25
235 IF X=AGOTO 50
240 IF @(X)<YGOTO 50
245 Y=@(X)
250 NEXT X
260 FOR X=1TO 25
270 MU=X;NEXT X
280 GOTO 10
300 IF E=0GOTO 50
302 FOR X=1TO 5
304 MU=X;NEXT X
310 GOTO 50
400 MU=@(Y)
405 Z=Y-1
410 CX=-30+(Z-Z+5)*13
420 CY=30-Z+5*14
430 TU=@(Y)
440 RETURN

```

# ARCADIAN

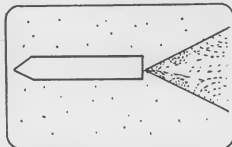
## LOGO

PROGRAM NAME

AUTHOR Guy McLimore  
ABC Hobbycraft  
2155 E. Morgan Ave.  
Evansville, IN 47711

DESCRIPTION:

ISSUE Vol 2 Page 3



This is a graphics program that projects a random star field on the screen, then prints a word. A tail erupts from the end of the word. A rocket, which in turn becomes surrounded by a rocket. We use this as the logotype for the Newsletter.

LISTING:

```

10 CLEAR
20 &(9)=37
30 BC=250;FC=7
40 FOR A=1 TO 150
50 H=RND (160)-80;V=RND (88)-44
60 BOX H,V,1,1,RND (2)
70 NEXT A
80 &(9)=85;&(1)=250
90 &(2)=108;&(11)=250
100 CX=-44;CY=0
110 PRINT "ARCADIAN"
120 LINE 0,0,4
130 FOR Q=0 TO 35 STEP 2
140 LINE 75,0,3;LINE 0,0,4
150 LINE 75,-Q,3;LINE 0,0,4
160 NEXT Q
170 L=7;FOR Z=48 TO 51
180 BOX -Z,0,1,L,1
190 L=L-2
200 NEXT Z
210 BOX -22,0,50,9,3
220 FOR Q=0 TO 35
230 LINE 75,Q,3;LINE 0,0,4
240 LINE 75,-Q,3;LINE 0,0,4
250 NEXT Q
260 GOTO 220

```

# ARCADIAN

PROGRAM NAME MICROTREK

ISSUE Volume 1, page 89; V2ph

AUTHOR Bill Andrus  
7834 Thomas Dr.  
North Highlands, CA 95660

```

1 2 3 4 5 6 7 8
1 . . . * . . . 1
2 . * . . . K . 2
3 . . . * . . . 3
4 . . . . . . . 4
5 . E . * . . . 5
6 . * . . . K . 6
7 . . . . * . . 7
8 . . K . . . . 8
1 2 3 4 5 6 7 8

```

COMMAND:

## DESCRIPTION

A small version of Star Trek. The Space is an 8x8 quadrant of 64 Sectors. You can move to any legal, unoccupied sector. If you are adjacent to a Star Base, you are docked and restoring energy. The Commands are:

- 1: Move to Sector (row,column) If either command is zero, the command is cancelled
- 2: Move to a new Quadrant, extending your search for Klingons and Star Bases.
- 3: fire on Sector (row,column) - watch your energy
- 4: Sensor report - \* are Stars K is Klingons E is Enterprise B is Star Base S: Status report - gives display

## LISTING

```

30 CLEAR :INT=0
40 D=RND (40):IF D<30GOTO 40
50 W=RND (35):IF W<10GOTO 50
60 D=(D,W)+20:L=10000
70 PRINT " *MICROTREK*
100 A=0:K=0:S=10:T=10
110 FOR I=1TO 64:0(I)=0
120 X=RND (12):IF X>2 0(I)=1
130 IF X=3 IF K<W 0(I)=2:K=K+1
140 NEXT I
150 X=RND (64):IF 0(X)>1 GOTO 150
160 0(X)=3:GOSUB 850:B=RND (17):IF B>5 GOTO 200
170 X=RND (64):IF 0(X)>1GOTO 170
180 0(X)=4:S=(X-1)+8:T=X-S
200 CLEAR :C=E-S:IF C<0C=-S
210 G=F-T:IF G<0 G=-G
220 O=0:IF C<2 IF G<2 O=1
230 D=D-1:IF D=0 GOTO 970
240 IF (K=0)+(O=1) GOTO 270
250 GOSUB 860:PRINT 04,H,"UNIT HIT FROM"
260 PRINT "KLINGONS!"
270 IF O=1 L=10000
280 INPUT "COMMAND: "A
290 IF A=1 GOTO 350
300 IF A=2 GOTO 480
310 IF A=3 GOTO 450
320 IF A=4 GOTO 550
330 IF A=5 GOTO 650
340 GOTO 280
350 GOSUB 920:X=(Y-1)+8+Z:IF 0(X)>1 PRINT "SECTOR OCCUPIED":GOTO 350
360 U=1:GOSUB 870:0(X)=3:0(E=0+F)=1:GOSUB 850:GOTO 200
400 G=RND (250)+300:U=1:GOSUB 900:GOTO 100
450 GOSUB 920:U=2:GOSUB 870:X=(Y-1)+8+Z:U=0(X):IF U<2 GOTO 230
460 IF U=3 PRINT "YOU DESTROYED YOURSELF!!":GOTO 990
470 IF U=4 PRINT "STARBASE DESTROYED!!":S=10:T=10:GOTO 200
480 IF R<500 IF (RND (R+500)+6)>10 PRINT "YOU MISSED!!":GOTO 230
490 0(X)=1:K=K-1:W=W-1:IF W=0 GOTO 230
500 PRINT "MISSION ACCOMPLISHED!!":GOTO 990
550 CLEAR :GOSUB 630
560 FOR I=1TO 8:PRINT 01,I,:FOR J=1TO 8
570 X=0((I-1)+8+J):IF X=0 PRINT " . ",
580 IF X=1 PRINT " * ",
590 IF X=2 PRINT " K ",
600 IF X=3 PRINT " E ",
610 IF X=4 PRINT " B ",
620 NEXT J:PRINT 01,I:NEXT I:GOSUB 630:GOTO 280
630 PRINT " 1 2 3 4 5 6 7 8":RETURN
650 CLEAR :PRINT " STATUS REPORT"
660 PRINT "SECTOR: ",017,+1," ",01,F
670 PRINT "STARDATE: ",017,D
680 PRINT "ENERGY: ",019,I:PRINT "KLINGONS: ",017,W
690 PRINT "CONDITION: ",:GOSUB 700:GOTO 280
700 IF O=1PRINT "DOCKED":FC=0:RETURN
710 IF K>0PRINT " RED":FC=90:RETURN
720 IF L=2000PRINT " GREEN":FC=172:RETURN
730 PRINT "YELLOW":FC=133:RETURN
850 E=(X-1)+8:F=X-E+8:RETURN
860 H=(RND (50)+200)*K:G=H:U=1:GOTO 900
870 R=((Y-E)*(Y-E))+((Z-F)*(Z-F))*100
880 G=R+10:IF G=0 RETURN
890 J=G:G=(R+G+G)+2:IF G<J GOTO 890
900 L=L-U+G:IF L>8 RETURN
910 PRINT "OUT OF ENERGY!!":GOTO 990
920 INPUT "SECTOR ROW: "Y:IF Y=0 GOTO 280
930 IF (Y<1)+(Y>8) GOTO 920
940 INPUT "SECTOR COLUMN: "Z:IF Z=0 GOTO 280
950 IF (Z<1)+(Z>8) GOTO 940
960 RETURN
970 PRINT "OUT OF TIME!!":GOTO 990
990 PRINT "GAME OVER."

```

# ARCADIAN

PROGRAM NAME NICHOMACHUS

AUTHOR Hank Chiuppi  
275 St. Mary's  
Buffalo Grove, IL 60090

DESCRIPTION:

Volume 2 page 72

HELLO! I AM THE BALLY  
COMPUTER.  
HOW MANY LETTERS IN  
YOUR NAME?

The computer attempts to guess a number you have chosen by asking three questions. The player has to do some arithmetic to supply the answers.

LISTING:

```

10 CLEAR
20 PRINT "HELLO! I AM THE BALLY      COMPUTER.
30 INPUT " HOW MANY LETTERS IN YOUR NAME?"L
40 IF L<5PRINT "MY, YOU HAVE A VERY SHORT NAME!"
50 IF L>15PRINT "WOW! YOU HAVE A VERY LONG NAME!"
60 PRINT " BY THE WAY, WHAT IS YOUR NAME?"
70 FOR A=1TO L:B=KP:@(A)=B
80 NEXT A
90 PRINT "HELLO!";GOSUB 1000
100 GOSUB 2000
110 PRINT " --OOPS! SORRY";PRINT "ABOUT THAT.
120 GOSUB 2000
130 PRINT "HELLO!";GOSUB 3000
140 GOSUB 2000
150 PRINT " --THAT'S BETTER.
160 INPUT "WOULD YOU LIKE TO PLAY A GAME? (1=YES 2=NO)*G
170 IF G=1GOTO 200
180 PRINT "IT WAS NICE MEETING YOU";GOSUB 1000
190 STOP
200 PRINT "OK ";GOSUB 3000
210 PRINT " --PICK A NUMBER";PRINT "BETWEEN 7 AND 100";PRINT "DON'T TELL ME
    WHAT IT IS.
220 GOSUB 2000
230 INPUT "YOUR * :3 HAS A REMAINDER OF?"Q
240 INPUT "YOUR * :5 HAS A REMAINDER OF?"R
250 INPUT "YOUR * :7 HAS A REMAINDER OF?"S
255 D=0
260 D=(70*Q)+(21*R)+(15*S)
270 IF D<=105GOTO 300
280 D=D-105
290 GOTO 270
300 PRINT "YOUR * IS ",D;PRINT "RIGHT?"
310 INPUT " (1=YES 2=NO)*X
320 IF X=1GOTO 340
330 PRINT "I THINK YOUR ARITHMETIC IS IN ERROR!!
340 PRINT "WANT TO TRY AGAIN?";GOSUB 3000
350 INPUT " (1=YES 2=NO)*Y
360 IF Y=1GOTO 200
370 GOTO 180
1000 FOR C=LTO 1STEP -1
1010 TV=@(C)
1020 NEXT C
1030 RETURN
2000 FOR T=1TO 2000
2010 NEXT T
2020 RETURN
3000 FOR C=1TO L;TV=@(C)
3010 NEXT C
3020 RETURN

```

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# ARCADIAN

PROGRAM NAME REVERSE

AUTHOR Brett Bilbrey & Mike Toth  
14438 Barclay  
Dearborn, MI 48126

DESCRIPTION:

Volume 1 page 38,46

74

6159328

REVERSE DIGITS 1 THRU ☐

Nine numbers are randomly placed in line. The object is to arrange them in numerical order (smallest to the left). The knob of hand controller (1) is used to indicate how many numbers will be moved, and the trigger used to make the move.

LISTING:

```

9 NT=9
10 N=9: CLEAR
20 @(1)=RND (9)
30 FOR K=2 TO N
40 @(K)=RND (9)
50 FOR J=1 TO K-1
60 IF @(K)=@(J) GOTO 40
70 NEXT J: NEXT K
80 CY=25
90 PRINT "THE LIST IS"
100 T=0
110 GOSUB 280
120 CY=-20: CX=0: Q=0: NT=0
130 O=KN(1)+32+6: IF TR(1)=1 GOTO 160
135 CY=-33
140 IF O#Q CX=-77: PRINT "REVERSE DIGITS 1 THRU ", #1, O: Q=O
150 GOTO 130
160 T=T+1
170 FOR K=1 TO Q+2
180 Z= @(K)
190 @(K)= @(Q-K+1)
200 @(Q-K+1)=Z
210 NEXT K
220 GOSUB 280
230 FOR K=1 TO 9: IF @(K)#K GOTO 120
240 NEXT K
250 CX=-70
255 CLEAR
260 CY=0: PRINT " YOU WON IN ", TU=T+10+48: TU=T-T+10+10+48: PRINT " MOVES"
265 PRINT " PULL TR(1) TO ← I4 sp. → PLAY AGAIN"
270 IF TR(1)#1 GOTO 270
275 GOTO 10
280 CX=-5: CY=0
290 FOR B=1 TO N: TU=48+@(B): B=32: NEXT B
300 RETURN

```

PROGRAM NAME: SPIRALS II

AUTHOR Matt Giwer  
3922 Millcreek Dr.  
Annandale, VA 22003

DESCRIPTION:

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This is an artistic exercise that draws patterns on the screen, using a diamond motif as generated by a line following a spiral path around the center.

LISTING:

```

10 CLEAR
100 A=3
200 B=RND (2)
210 C=RND (2)
800 X=B;Y=0
850 FOR D=1TO 100
900 X=X+B
905 Y=Y+C
907 IF X>75GOTO 100
908 IF Y>45GOTO 100
910 GOSUB 1050
950 NEXT D
990 GOTO 10
1050 .M
1060 LINE X,0,A
1070 LINE 0,-Y,A
1090 LINE -X,0,A
1110 LINE 0,Y,A
1200 RETURN
>

```



ARCADIAN SAMPLER PROGRAMS, as included herein, are also available on a single tape. It can be purchased in either the ARCADE Plus format (where the cassette interface is on the Basic cartridge), or in the Bally Basic format (where there is a separate cassette interface). Either cartridge is \$7.50

OTHER DOCUMENTATION available includes the disassembled listings of the Basic languages. Advanced hackers will find these of value in developing more complex programs. The Bally Basic listing is \$6.50, while the new Arcade Plus listing is \$7.50.

TAPED PROGRAMS are also available of other programs that have appeared in the ARCADIAN. We have tapes of the "BEST OF ARCADIAN" for 1979, 1980, and 1981. Inquire as to contents and prices.

ARCADIAN  
3626 Morrie Drive  
San Jose, CA 95127-9990

408-272-1060  
The SOURCE TCD959



# ARCADIAN

WELCOME TO THE FASCINATING WORLD OF ARCADE PROGRAMMING!

The enclosed programs were selected to help you enjoy your Arcade-Plus game unit, and were originally published in the ARCADIAN. If you review the programs included here against their listing in the ARCADIAN, you will find that we have made some procedural changes in order to be compatible with your new Basic cartridge. These programs are presented as "listings" - all the instructions necessary for the computer to operate, in a standardized format that the computer understands.

These programs have all been checked for operation and you should have no problem with them. Read the Manual that came with the Basic in case you have difficulty - and here are a couple of Instructions that are useful for any program you wish to enter.

1. Make NO modifications.

2. It is implied that every line ends with a 'WORDS GO' entry, that is equivalent to a typewriter's carriage return. Up to this point, you could make changes, correct errors, etc., because the work you were doing was being temporarily stored in a "keypad buffer". Once you press the 'WORDS GO' sequence, that work is transferred to the computer and the keyboard buffer is ready for another line of input.

3. Punctuation marks have a different meaning to the computer. Do not substitute, add, or delete any.

4. After the last line entry, type in "WORDS RUN GO" to get the program into operation.

5. If the computer has a problem and questions your instruction, the instruction will be listed with a question mark at the problem area. First 'LIST' the line in question (for example, if the computer prints line 140 on the screen, enter "LIST 140, 1 WORDS GO". This will list only line 140, just as it was entered.) and see that it is exactly as you wanted it, especially in the area where the question mark was. Next, make sure that the computer can do what you want it to - is it supposed to go to a subroutine that isn't there? or use a variable that has not been entered? are there enough terms for a LINE or BOX command? etc.

6. If the problem is unsolvable, list the program to a tape, send it to us, and we'll return a "fixed" program to you.

7. Once the program is running, you can store it on tape for your future use. And after it is stored, you can start to manipulate the program in the computer and make whatever modifications you might wish.

All programs are available on a single tape, at \$7.50 postpaid.

ARCADIAN Newsletter

## PROGRAM NAME BAGELS

ISSUE Volume 2 page 25

### AUTHOR

Carl Morimoto  
4803 Hamilton Park Dr.  
San Jose, CA 95130

### DESCRIPTION

The computer picks a three-digit number (no duplicate digits) that you have to guess. Each time that you make a three-figure guess, the computer responds with one of the following:

BAGELS no digit is correct  
PICO one correct digit in the wrong place  
PICO-PICO two or more correct digits in the wrong place  
FERMI one correct digit in the right place  
FERMI-PICO one correct digit in the right place, and one or more correct digits in the wrong place  
FERMI-FERMI two or more correct digits in the right place

When you think that you have the right numbers, press GO, and the computer will respond. If you want to give up, enter three zeros 000

```
>371 BAGELS
>214 PICO
>124 FERMI
>526 FERMI
>□
```

### LISTING

```
50 CLEAR :NT=0:FC=66:BC=7
60 Z=300
70 O=0:W=0:D=0:C=0:U=0:F=0
100 BOX 5,-5,80,50,1:BOX 5,-5,78,48,3
110 CX=-48:CY=20:PRINT "BAGELS"
120 BOX -26,20,49,11,3
130 NT=5:FOR A=1 TO 15
140 CX=RND (3)*20-40:CY=RND (5)*8-30
150 FOR B=1 TO 3:TU=47+RND (10):NEXT B:NEXT A
160 NT=0:FC=252
170 CX=25:CY=-39:PRINT "PRESS GO",
175 BOX 63,-39,13,9,3
180 A=RND (10)
190 IF &(23)=0 GOTO 180
200 @ (4)=RND (10)-1:@ (7)=@ (4)
210 @ (5)=RND (10)-1
220 IF @ (4)=@ (5) GOTO 210
230 @ (8)=@ (5)
240 @ (6)=RND (10)-1
250 IF (@ (6)=@ (4))+@ (6)=@ (5) GOTO 240
260 CLEAR :G=0:O=0+1:FC=7:BC=243
270 CY=40:PRINT " GAME",@3,0
280 IF U CX=0:CY=40:PRINT "AVERAGE",@3,U,".",@1,F
300 NT=0:CX=-77:PRINT "
310 NT=1:CX=-77:PRINT @2,G+1,"")
320 FOR A=1 TO 3
330 X=KP:IF X=31 GOTO Z
340 TU=X
350 IF (X<48)-(X>57) GOTO 900
360 @ (A)=X-48:NEXT A
370 IF @ (1)+@ (2)+@ (3)=0 GOTO 750
380 IF (@ (1)+@ (2))+@ (1)+@ (3))+@ (2)+@ (3) GOTO 910
500 G=+1:P=0
510 FOR A=1 TO 3
520 IF @ (A)=@ (A+3) P=P+4
530 IF @ (A)=@ (A+4) P=P+1
540 IF @ (A)=@ (A+5) P=P+1
550 NEXT A

4610 IF P=0 PRINT " BAGELS":GOTO Z
4620 IF P=1 PRINT " PICO":GOTO Z
4630 IF P<=3 PRINT " PICO-PICO":GOTO Z
4640 IF P=4 PRINT " FERMI":GOTO Z
4650 IF P<7 PRINT " FERMI-PICO":GOTO Z
4660 PRINT " FERMI-FERMI"
4670 PRINT "GAME GUESSES?",A:KP
4680 IF A=13 GOTO 700
4690 PRINT "NO",NT=30:MU=20:MU=18:MU=18:GOTO Z
4700 CX=CX-12:PRINT " ":PRINT :IF P<12 GOTO 740
4710 PRINT "YOU GOT IT":W=W+1:BC=155
4720 NT=8:A=48:MU=99:MU=53:MU=A:MU=49:MU=A:MU=A:MU=A
4730 MU=50:MU=49:MU=50:MU=51:MU=A:MU=51:MU=A:MU=51:MU=A:
GOTO 790
4740 PRINT "SORRY, WRONG NUMBER":D=D+1:BC=66:GOTO 750
4750 PRINT :PRINT :PRINT "GAVE UP":BC=123
4760 PRINT "CORRECT NUMBER WAS ",@1,@ (4),@ (5),@ (6)

770 NT=10:MU=51:MU=45:MU=51:MU=51:MU=45:MU=51:MU=51
780 MU=99:MU=55:MU=50:MU=49:MU=99:MU=54:MU=48:MU=48
790 NT=0
800 C=C+G:IF W=0 GOTO 860
810 U=C-W:F=(RND (10)*W
820 PRINT "STAT. AFTER GAME @",@2,0
830 PRINT " ♦ GAMES WON ...",@2,W
840 PRINT " ♦ GAMES LOST ...",@2,D
850 PRINT " AVE ♦ GUESSES...",@2,U,".",@1,F
860 GOTO 180
900 PRINT " INPUT ERROR":GOTO 920
910 PRINT " DUPLICATE DIGITS",
920 NT=5:MU=87:MU=84:NEXT A
930 GOTO Z
```

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PROGRAM NAME: CONNECT FOUR

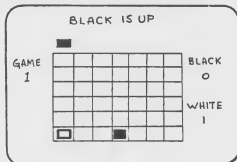
ISSUE: Volume 2 page 35

AUTHOR

Larry Connitz  
2106 Hastings St.  
Orlando, FL 32808

## DESCRIPTION-

The object is to get four squares in a row while preventing your opponent from doing the same. Use hand controllers (1) and (2). When four squares are lined up, move the joystick sideways to register the win.



## LISTING-

```

10 BC=126
20 FC=0
30 NT=0
900 P=1:L=1:M=0:N=0
950 CLEAR:GOSUB 3000
960 CLEAR
1000 BOX=-4,-36,110,2
1002 CX=-70:CY=20:PRINT "GAME",
1004 CX=45:CY=20:PRINT "BLACK",
1005 CX=58:CY=-20:PRINT "O,M
1006 CX=45:CY=-10:PRINT "WHITE",
1007 CX=58:CY=10:PRINT "O,N
1008 CX=-64:CY=10:PRINT "O,L
1010 BOX=-4,-3,87,56,1
1020 FOR B=-40TO 32STEP 12
1030 FOR C=20TO -25STEP -9
1040 BOX B,C,11,0,2
1050 NEXT C
1060 NEXT B
1070 X=-40
1080 D=-34:E=-34:F=-34:G=-34:H=-34:I=-34:J=-34
1090 CY=40:IF P=1:PRINT "BLACK IS UP":GOTO 1600
1110 CY=40:IF P=2:PRINT "WHITE IS UP":GOTO 1600
1200 IF TR(1)=1GOTO 2000
1210 IF JX(1)=1GOTO 1500
1220 IF JX(1)=-1GOTO 1510
1230 IF JY(2)=1GOTO 3500
1240 GOTO 1200
1400 IF TR(2)=1GOTO 2000
1405 IF JX(2)=1GOTO 900
1410 IF JX(2)=1GOTO 1500
1420 IF JX(2)=-1GOTO 1510
1430 IF JY(1)=1GOTO 3600
1440 GOTO 1400
1500 X=X+12:GOTO 1600
1510 X=X-12:GOTO 1600
1600 IF X<-40X=-40
1610 IF X>32X=32
1620 BOX=-4,30,100,6,2
1700 BOX X,30,9,6,1
1705 IF P=2BOX X,30,5,4,2
1706 NT=1
1710 MU="Y":MU="Z"
1711 NT=0
1720 IF P=1GOTO 1200
1730 IF P=2GOTO 1400

```

←N→ MOVES  
"LEAVE  
N  
SPACES"

```

2000 IF X=-40D=D+9:GOTO 2200
2010 IF X=-28E=E+9:GOTO 2300
2020 IF X=-16F=F+9:GOTO 2400
2030 IF X=-4G=G+9:GOTO 2500
2040 IF X=8H=H+9:GOTO 2600
2050 IF X=20I=I+9:GOTO 2700
2060 IF X=32J=J+9:GOTO 2800
2200 BOX X,D,9,6,1
2210 IF P=2BOX X,D,5,4,2:P=1:GOTO 1100
2220 P=2:GOTO 1100
2300 BOX X,E,9,6,1
2310 IF P=2BOX X,E,5,4,2:P=1:GOTO 1100
2320 P=2:GOTO 1100
2400 BOX X,F,9,6,1
2410 IF P=2BOX X,F,5,4,2:P=1:GOTO 1100
2420 P=2:GOTO 1100
2500 BOX X,G,9,6,1
2510 IF P=2BOX X,G,5,4,2:P=1:GOTO 1100
2520 P=2:GOTO 1100
2600 BOX X,H,9,6,1
2610 IF P=2BOX X,H,5,4,2:P=1:GOTO 1100
2620 P=2:GOTO 1100
2700 BOX X,I,9,6,1
2710 IF P=2BOX X,I,5,4,2:P=1:GOTO 1100
2720 P=2:GOTO 1100
2800 BOX X,J,9,6,1
2810 IF P=2BOX X,J,5,4,2:P=1:GOTO 1100
2820 P=2:GOTO 1100
3000 CY=20:PRINT "←G→ CONNECT FOUR
3010 PRINT:INPUT "NUMBER OF GAMES?"K
3020 RETURN
3500 CX=-56:CY=-38:PRINT "WHITE CONNECTS FOUR"
3510 M=M+1:CY=58:CY=-20:PRINT "O,M
3515 L=L+1
3520 IF L=1KGOTO 4500
3530 IF TR(2)=1GOTO 1000
3540 GOTO 3530
3600 CX=-56:CY=-38:PRINT "BLACK CONNECTS FOUR
3610 N=N+1:CY=58:CY=10:PRINT "O,N
3615 L=L+1
3620 IF L=1KGOTO 4500
3630 IF TR(1)=1GOTO 1000
3640 GOTO 3630
4500 CY=40:PRINT "←N→ GAME OVER
4510 IF JX(2)=1GOTO 900
4520 GOTO 4510

```

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# ARCADIAN

PROGRAM NAME BINGO

ISSUE

Volume 2 page 34

AUTHOR

Ernie Some  
248 S. Forest St.  
Bellingham, WA 98225

## DESCRIPTION

B	I	N	G	O	B	I	N	G	O
8	23	39	54	62	5	27	45	60	69
10	27	42	50	75	11	19	34	54	67
6	28	H	52	65	14	20	C	58	63
15	16	40	53	63	12	30	44	57	68
11	29	36	60	72	4	24	40	53	64

\*75 UNDER O

The computer plays against you, with one Bingo card each. The computer randomly draws numbers and displays them on the screen. Turn the knob to indicate whether you have the number (yes/no) and pull the trigger to register. The computer then checks its card.

## LISTING

```

30 CLEAR :NT=1:FC=179:(23)=255
40 @$(S)=B4:&$(0)=7:&$(1)=7:&$(2)=88:&$(3)=88
50 BOX -40,9,68,65,1:BOX -40,4,64,49,2
60 BOX 34,9,68,65,1:BOX 34,4,64,49,2
70 CX=-64:CY=36:PRINT "B I N G O":CX=18:PRINT "B I N G O"
80 FOR L=-60TO -21STEP 13:BOX L,10,1,64,1:BOX L+74,10,1,64,1:NEXT L
90 FOR L=-11TO 19STEP 10:BOX -40,L,68,1,1:BOX 34,L,68,1,1:NEXT L
100 C=0:D=0:X=-69:Y=34
110 FOR L=1TO 125:@(L)=0:NEXT L
120 FOR L=75TO 95STEP 5
130 FOR M=1TO 5
140 N=RND (15)+C
150 IF (@(L+1)=N)+(@(L+2)=N)+(@(L+3)=N)+(@(L+4)=N)+(@(L+5)=N)GOTO 140
160 @(L+M)=N
170 CX=X:CY=Y+(-M*10):PRINT @2,N,
180 N=RND (15)+C
190 IF (@(L+26)=N)+(@(L+27)=N)+(@(L+28)=N)+(@(L+29)=N)+(@(L+30)=N)GOTO 180
195 @(L+25+M)=N
200 CX=X+74:CY=Y+(-M*10):PRINT @2,N,
210 NEXT M
220 C=C+15:X=X+13
230 NEXT L
232 FOR L=1TO 3:CY=4:CX=-40:PRINT "H":CX=34:PRINT "C",
233 BOX -40,4,12,9,L:BOX 34,4,12,9,L:NEXT L
234 @(88)=1:@(113)=-1
240 FOR L=1TO 75
250 N=RND (75):IF @(N)<0GOTO 250
260 @(N)=-1
262 CX=-72:CY=-32
264 IF N<16PRINT " * ",@2,N," UNDER B",
266 IF N>15IF N<31PRINT " * ",@2,N," UNDER I",
268 IF N>30IF N<46PRINT " * ",@2,N," UNDER N",
270 IF N>45IF N<61PRINT " * ",@2,N," UNDER G",
272 IF N>60PRINT " * ",@2,N," UNDER O",
278 BOX 34,-32,70,10,2
280 IF KN(1)<0PRINT " NO? ",
290 IF KN(1)>0PRINT " YES?",
300 IF TR(1)=0GOTO 262
310 IF KN(1)<0GOTO 340
320 A=0:U=0:GOSUB 400
330 GOSUB 600
340 A=25:U=74:GOSUB 400
350 GOSUB 600
360 NEXT L
400 FOR S=76+ATO 100+A:IF @(S)=NGOTO 500
410 NEXT S

```

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## BINGO (continued)

```

430 IF A=25RETURN
440 PRINT " NOPE";RETURN
500 X=-66
510 FOR S=75+ATO 95+ASTEP 5
512 Y=24
520 FOR T=1TO 5
530 IF @(S+T)=N&(21)=255;BOX X+U,Y,12,9,3;@(S+T)=-1;&(21)=0;RETURN
540 Y=Y-10;NEXT T
550 X=X+13;NEXT S
560 RETURN
600 FOR S=76+ATO 96+ASTEP 5
610 IF @(S)=-1IF @(S+1)=-1IF @(S+2)=-1IF @(S+3)=-1IF @(S+4)=-1GOTO 800
620 NEXT S
630 FOR S=76+ATO 80+A
640 IF @(S)=-1IF @(S+5)=-1IF @(S+10)=-1IF @(S+15)=-1IF @(S+20)=-1GOTO 800
650 NEXT S
660 FOR S=76+ATO 100+ASTEP 6
670 IF @(S)*-1GOTO 700
680 NEXT S
690 GOTO 800
700 FOR S=80+ATO 96+ASTEP 4
710 IF @(S)*-1RETURN
720 NEXT S
800 CY=-40
810 FOR L=0TO 9
820 IF A=0CX=-72;PRINT "BINGO--YOU WIN",
830 IF A=25CX=8;PRINT "BINGO--I WIN",
840 NEXT L

```

## PROGRAM NAME HORSERACE

ISSUE Volume 3 page 26

### AUTHOR

Paul Slezak  
1104 S. Neltner  
West Chicago, IL 60185

### DESCRIPTION

Eight horses are available to bet upon, using the keypad to enter your horse (B) and the value of your bet (C). The computer then randomly moves the horses across the screen and calculates the winnings.

			X
			X
	1		F
	2		I
3			N
4			I
5			S
6			H
7			X
8			X

### LISTING

```

5 NT=0: CLEAR : FC=155: BC=160: N=0: FOR Z=1 TO 4: C(Z+20)=500: NEXT Z: C(9)=180
10 CY=5: PRINT "WELCOME TO ARLINDUNG PARK": INPUT "♦ OF PLAYERS? (1-4)": A: IF A>4
GOTO 10
15 GOSUB 290
20 CLEAR : CX=-20: PRINT "RACE ♦": PRINT "1, N: T=0: S=0: GOSUB 600
30 FOR Z=1 TO 8: PRINT "2, Z, : C(Z+B)=RND (5)+RND (3)+1: CX=30: PRINT "1, C(Z+B): CX=
45: PRINT "1": CX=-50: GOTO 30+Z
31 PRINT "ALBADEXTER": NEXT Z
32 PRINT "JO L IN": NEXT Z
33 PRINT "C BICUSPID": NEXT Z
34 PRINT "SEATTLE SLEWED": NEXT Z
35 PRINT "MOMAN O' WAR": NEXT Z
36 PRINT "DUSTY PAUL": NEXT Z
37 PRINT "DIABLO": NEXT Z
38 PRINT "SECRETARYLESS": NEXT Z
40 FOR Z=1 TO A: IF C(Z+20)=0: C(Z+16)=0: NEXT Z: GOTO 100
50 CY=-32: PRINT "PLAYER ♦": PRINT "1, Z, : CX=-20: INPUT B: CY=-32: CX=10: INPUT C
60 IF B=0: IF B<10: GOTO 80
70 GOTO 50
80 IF C>0: C(Z+20): CY=-32: PRINT "SORRY, I'M NO LOAN SHARK": GOSUB 610: CY=-32: FOR D=1
TO 23: PRINT " ": NEXT D: CX=-70: GOTO 50
90 C(Z+16)=B: C(Z+20)=C: C(Z+24)=C: NEXT Z
100 FC=160: NT=5: PRINT "146 641 641 641000000": CLEAR : NT=0: FC=155: CY=35
110 FOR Z=1 TO 10: CX=70: GOTO 110+Z
111 PRINT "X": NEXT Z
112 PRINT "X": NEXT Z
113 PRINT "F": NEXT Z
114 PRINT "I": NEXT Z
115 PRINT "N": NEXT Z
116 PRINT "I": NEXT Z
117 PRINT "S": NEXT Z
118 PRINT "H": NEXT Z
119 PRINT "X": NEXT Z
120 PRINT "X": NEXT Z
130 CY=25: FOR Z=1 TO 8: PRINT "2, Z, : CX=-60: PRINT " ": NEXT Z: GOSUB 610
140 CY=25: FOR Z=1 TO 8: CX=-60: PRINT " ": NEXT Z
150 NT=1: C(Z+20)=50: C(Z1)=205: FOR Z=1 TO 35: MU="U": NEXT Z: NT=0: C(Z+20)=0: C(Z1)=0: CY=
Z5: FOR Z=1 TO 8: PRINT " ": NEXT Z
155 CY=0: PRINT "AND THEY'RE OFF!!!": GOSUB 610: CY=0: PRINT " 19 SPACES "
160 GOSUB 610
170 CY=25: FOR Z=1 TO 8: C(Z)=C(Z)+(RND (4)+B+RND (5))-(RND (C(Z+B))): CX=C(Z): PR
INT "1, Z: IF C(Z)>655=1
175 NEXT Z: GOSUB 610
180 IF S=1: GOTO 200
190 CY=25: GOSUB 620: GOTO 160

```

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# ARCADIAN

## HORSERACE (continued)

```

200 G=0;FOR Z=1TO 8;IF G>@(Z)NEXT Z;GOTO 220
210 X=Z;G= @(Z);M= @(Z+8);NEXT Z
220 B=0;FOR Z=1TO 8;IF @(Z)>65B=B+1
230 NEXT Z;IF B>1GOSUB 500
240 CLEAR ;CY=0;PRINT "THE WINNER IS #",;PRINT #2,X;GOSUB 610
250 FOR Z=1TO A;IF @(Z+16)=X@ (Z+20)=@(Z+24)bM+@(Z+20)
260 NEXT Z
290 CLEAR ;CX=-30;PRINT "YOU HAVE"
300 FOR Z=1TO A;PRINT "PLAYER #",;PRINT #1,Z,;PRINT #2," $",;PRINT #2,@ (Z+20);
NEXT Z
310 FOR Z=1TO 3000;NEXT Z
320 IF N>8GOTO 400
330 N=N+1;IF N>0GOTO 20
340 RETURN
400 CLEAR ;FC=79;BC=82;CY=16;CX=-35;PRINT "RACES OVER!!";PRINT ;PRINT
410 PRINT "IF YOU WANT 9 MORE RACES PRESS 1";A=KP;IF A#49STOP
420 GOTO 5
500 FOR Z=1TO 6;CLEAR ;FC=212;BC=209;CY=0;CX=-35;PRINT "PHOTO FINISH";NEXT Z;
BC =160;FC=155
510 RETURN
600 FOR Z=1TO 8;@(Z)=-78;NEXT Z;RETURN
610 FOR F=1TO 300;NEXT F;RETURN
620 FOR D=1TO 8;CX= @(D);PRINT " ";NEXT D;RETURN

```

# ARCADIAN

PROGRAM NAME: FIFTEEN

ISSUE: volume 2 page 64

AUTHOR Bob Wiseman  
6594 Swartout Rd.  
Algonac, MI 48001

## DESCRIPTION-

A	C	G	Y	E
R	K	F	O	D
P	J	M	B	H
Q	L	S	T	
U	W	X	N	V

Based on the familiar 15 puzzle, this version uses letters. They are randomly placed by the computer, and you use the joystick to move the letters into the empty space, in order to place them all in alphabetical order.

## LISTING-

```

10 FC=11;U=400;CLEAR
12 NT=1
15 BOX -2,0,75,75,1
16 BOX -2,0,73,73,3
20 E=0;A=25
30 FOR Y=1TO 24
31 @ (Y)=Y+E4
35 GOSUB 400;NEXT Y
40 @ (25)=32;GOSUB 400
50 IF TR(1)=1U=1
60 IF E=0B=RND (4);GOTO 100
70 I=JX(1);J=JY(1)
80 IF I=0IF J=0GOTO 70
90 IF IIF JGOTO 70
91 B=0
92 IF J B=J+2
94 IF I B=3-I
100 X=A-A+5
110 IF B=2IF X=1GOTO 300
120 IF B=4IF X=0GOTO 300
130 IF B=3IF A>20GOTO 300
140 IF B=1IF A<6GOTO 300
150 IF B=1D=A-5
160 IF B=2D=A-1
170 IF B=3D=A+5
180 IF B=4D=A+1
190 X=@ (D);@ (D)=32;@ (A)=X
192 IF E=1GOTO 200
193 U=U-1;A=D
194 IF U<200FOR Y=1TO 25;GOSUB 400;NEXT Y;E=1;GOTO 50
195 GOTO 50
200 Y=D;GOSUB 400
210 Y=A;GOSUB 400
220 A=D
221 IF U=0GOTO 50
222 U=0
225 Y=0
230 FOR X=1TO 25
235 IF X=AGOTO 250
240 IF @ (X)<YGOTO 50
245 Y=@ (X)
250 NEXT X
260 FOR X=1TO 25
270 MU=X;NEXT X
280 GOTO 10
300 IF E=0GOTO 50
302 FOR X=1TO 5
304 MU=X;NEXT X
310 GOTO 50
400 MU=@ (Y)
405 Z=Y+1
410 CX=-30+Z-Z+5*5*13
420 CY=30-Z+5*14
430 TU=@ (Y)
440 RETURN

```

# ARCADIAN

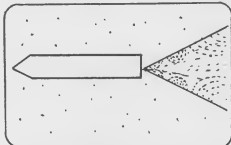
## LOGO

PROGRAM NAME

AUTHOR Guy McLimore  
ABC Hobbycraft  
2155 E. Morgan Ave.  
Evansville, IN 47711

DESCRIPTION:

ISSUE Vol 2 Page 3



This is a graphics program that projects a random star field on the screen, then prints a word. A tail erupts from the end of the word, which in turn becomes surrounded by a rocket. We use this as the logotype for the Newsletter.

LISTING:

```
10 CLEAR
20 &(9)=37
30 BC=250;FC=7
40 FOR A=1 TO 150
50 H=RND (160)-80;V=RND (88)-44
60 BOX H,V,1,1,RND (2)
70 NEXT A
80 &(9)=85;&(1)=250
90 &(2)=108;&(11)=250
100 CX=-44;CY=0
110 PRINT "ARCADIAN"
120 LINE 0,0,4
130 FOR Q=0 TO 35 STEP 2
140 LINE 75,Q,3;LINE 0,0,4
150 LINE 75,-Q,3;LINE 0,0,4
160 NEXT Q
170 L=7;FOR Z=48 TO 51
180 BOX -Z,0,1,L,1
190 L=L-2
200 NEXT Z
210 BOX -22,0,50,9,3
220 FOR Q=0 TO 35
230 LINE 75,Q,3;LINE 0,0,4
240 LINE 75,-Q,3;LINE 0,0,4
250 NEXT Q
260 GOTO 220
```

# ARCADIAN

PROGRAM NAME MICROTREK

AUTHOR

Bill Andrus  
7034 Thomas Dr.  
North Highlands, CA 95660

ISSUE Volume 1, page 89; V2p4

## DESCRIPTION

A small version of Star Trek. The Space is an 8x8 quadrant of 64 Sectors. You can move to any legal, unoccupied sector. If you are adjacent to a Star Base, you are docked and restoring energy. The Commands are:

- 1: Move to Sector (row,column) if either command is zero, the command is cancelled
- 2: Move to a new Quadrant, extending your search for Klingons and Star Bases.
- 3: fire on Sector (row,column) - watch your energy
- 4: Sensor report - \* are Stars K is Klingons E is Enterprise B is Star Base S: Status report - gives display

## LISTING

```

30 CLEAR :NT=0
40 D=RND (40):IF D<30GOTO 40
50 W=RND (35):IF W<10GOTO 50
60 D=(D,W)+20:L=10000
70 PRINT " *MICROTREK*
100 A=0:K=0:S=10:T=10
110 FOR I=1 TO 64:0(I)=0
120 X=RND (12):IF X>2 0(I)=1
130 IF X=3 IF K<W 0(I)=2:K=K+1
140 NEXT I
150 X=RND (64):IF 0(X)>1 GOTO 150
160 0(X)=3:GOSUB 850:B=RND (17):IF B>S GOTO 200
170 X=RND (64):IF 0(X)>1GOTO 170
180 0(X)=4:S=(X-1)+B:T=X-S*B
200 CLEAR :C=E-S:IF C<0C=-C
210 G=F-T:IF G<0 G=-G
220 O=0:IF C<2 IF G<2 O=1
230 D=D-1:IF D=0 GOTO 970
240 IF (K=0)+(O=1) GOTO 270
250 GOSUB 860:PRINT #4,H,"UNIT HIT FROM"
260 PRINT "KLINGONS!"
270 IF O=1 L=10000
280 INPUT "COMMAND: "A
290 IF A=1 GOTO 350
300 IF A=2 GOTO 400
310 IF A=3 GOTO 450
320 IF A=4 GOTO 550
330 IF A=5 GOTO 650
340 GOTO 280
350 GOSUB 920:X=(Y-1)*B+Z:IF 0(X)*1 PRINT "SECTOR OCCUPIED":GOTO 350
360 U=1:GOSUB 870:0(X)=3:0(E+B+F)=1:GOSUB 850:GOTO 200
400 G=RND (250)+300:U=1:GOSUB 900:GOTO 100
450 GOSUB 920:U=2:GOSUB 870:X=(Y-1)*B+Z:U=0(X):IF U<2 GOTO 230
460 IF U=3 PRINT "YOU DESTROYED YOURSELF!!":GOTO 990
470 IF U=4 PRINT "STARBASE DESTROYED!!":S=10:T=10:GOTO 200
480 IF R>500 IF (RND (R+500)+5)>10 PRINT "YOU MISSED!!":GOTO 230
490 0(X)=1:K=K-1:W=W-1:IF W=0 GOTO 230
500 PRINT "MISSION ACCOMPLISHED!!":GOTO 990
550 CLEAR :GOSUB 630
560 FOR I=1 TO 8:PRINT #1,I:FOR J=1 TO 8
570 X=0(I-1)*B+J:IF X=0 PRINT " * ",
580 IF X=1 PRINT " * ",
590 IF X=2 PRINT " * K ",
600 IF X=3 PRINT " * E ",
610 IF X=4 PRINT " * B ",

```

# ARCADIAN

PROGRAM NAME NICHOMACHUS

AUTHOR Hank Chiuppi  
275 St. Mary's  
Buffalo Grove, IL 60090

DESCRIPTION:

Volume 2 page 72

HELLO! I AM THE BALLY  
COMPUTER.  
HOW MANY LETTERS IN  
YOUR NAME?

The computer attempts to guess a number you have chosen by asking three questions. The player has to do some arithmetic to supply the answers.

## LISTING:

```

10 CLEAR
20 PRINT "HELLO! I AM THE BALLY      COMPUTER.
30 INPUT " HOW MANY LETTERS IN YOUR NAME?"L
40 IF L<5PRINT "MY, YOU HAVE A VERY SHORT NAME!"
50 IF L>15PRINT "WOW! YOU HAVE A VERY LONG NAME!
60 PRINT " BY THE WAY, WHAT IS YOUR NAME?
70 FOR A=1TO L:B=KP:@(A)=B
80 NEXT A
90 PRINT "HELLO!";GOSUB 1000
100 GOSUB 2000
110 PRINT " --OOPS! SORRY";PRINT "ABOUT THAT.
120 GOSUB 2000
130 PRINT "HELLO!";GOSUB 3000
140 GOSUB 2000
150 PRINT " --THAT'S BETTER.
160 INPUT "WOULD YOU LIKE TO PLAY A GAME? (1=YES 2=NO)"G
170 IF G=1GOTO 200
180 PRINT "IT WAS NICE MEETING YOU";GOSUB 1000
190 STOP
200 PRINT "OK ";GOSUB 3000
210 PRINT " --PICK A NUMBER";PRINT "BETWEEN 7 AND 100";PRINT "DON'T TELL ME
    WHAT IT IS.
220 GOSUB 2000
230 INPUT "YOUR # ÷3 HAS A REMAINDER      OF?"Q
240 INPUT "YOUR # ÷5 HAS A REMAINDER      OF?"R
250 INPUT "YOUR # ÷7 HAS A REMAINDER      OF?"S
255 D=0
260 D=(70*Q)+(21*R)+(15*S)
270 IF D<=105GOTO 300
280 D=D-105
290 GOTO 270
300 PRINT "YOUR # IS ",D;PRINT "RIGHT?
310 INPUT "(1=YES 2=NO)"X
320 IF X=1GOTO 340
330 PRINT "I THINK YOUR ARITHMETIC      IS IN ERROR!!
340 PRINT "WANT TO TRY AGAIN?";GOSUB 3000
350 INPUT "(1=YES 2=NO)"Y
360 IF Y=1GOTO 200
370 GOTO 180
1000 FOR C=LTO 1STEP -1
1010 TV=@(C)
1020 NEXT C
1030 RETURN
2000 FOR T=1TO 2000
2010 NEXT T
2020 RETURN
3000 FOR C=1TO L;TV=@(C)
3010 NEXT C
3020 RETURN

```

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# ARCADIAN

PROGRAM NAME REVERSE

AUTHOR Brett Bilbrey & Mike Toth  
14430 Barclay  
Dearborn, MI 48126

DESCRIPTION:

Volume 1 page 38,46

74



6159328

REVERSE DIGITS 1 THRU ☐

Nine numbers are randomly placed in line. The object is to arrange them in numerical order (smallest to the left). The knob of hand controller (1) is used to indicate how many numbers will be moved, and the trigger used to make the move.

LISTING:

```

9 NT=9
10 N=9;CLEAR
20 @(1)=RND (9)
30 FOR K=2TO N
40 @(K)=RND (9)
50 FOR J=1TO K-1
60 IF @(K)=@(J)GOTO 40
70 NEXT J;NEXT K
80 CY=25
90 PRINT "THE LIST IS"
100 T=0
110 GOSUB 280
120 CY=-20;CX=0;Q=0;NT=0
130 O=KN(1)/32+6;IF TR(1)=1GOTO 160
135 CY=-33
140 IF O#Q CX=-77;PRINT "REVERSE DIGITS 1 THRU ",#1,O;Q=0
150 GOTO 130
160 T=T+1
170 FOR K=1TO Q/2
180 Z=@(K)
190 @(K)=@(Q-K+1)
200 @(Q-K+1)=Z
210 NEXT K
220 GOSUB 280
230 FOR K=1TO 9;IF @(K)#KGOTO 120
240 NEXT K
250 CX=-70
255 CLEAR
260 CY=0;PRINT " YOU WON IN ",;TV=T+10+48;TV=T-T+10*10+48;PRINT " MOVES"
265 PRINT " PULL TR(1) TO  14 sp.  PLAY AGAIN"
270 IF TR(1)#1GOTO 270
275 GOTO 10
280 CX=-5;CY=0
290 FOR B=1TO N;TV=48+@(B);TV=32;NEXT B
300 RETURN

```

PROGRAM NAME: SPIRALS II

AUTHOR

Matt Giwer  
3922 Millcreek Dr.  
Annandale, VA 22003

DESCRIPTION:

Volume 2 page 95



LISTING:

```
10 CLEAR
100 A=3
200 B=RND (2)
210 C=RND (2)
800 X=B;Y=0
850 FOR D=1 TO 100
900 X=X+B
905 Y=Y+C
907 IF X>75 GOTO 100
908 IF Y>45 GOTO 100
910 GOSUB 1050
950 NEXT D
990 GOTO 10
1050 .M
1060 LINE X,0,A
1070 LINE 0,-Y,A
1090 LINE -X,0,A
1110 LINE 0,Y,A
1200 RETURN
>
```

This is an artistic exercise that draws patterns on the screen, using a diamond motif as generated by a line following a spiral path around the center.



# ARCADIAN

ARCADIAN SAMPLER PROGRAMS, as included herein, are also available on a single tape. It can be purchased in either the ARCADE Plus format (where the cassette interface is on the Basic cartridge), or in the Bally Basic format (where there is a separate cassette interface). Either cartridge is \$7.50

OTHER DOCUMENTATION available includes the disassembled listings of the Basic languages. Advanced hackers will find these of value in developing more complex programs. The Bally Basic listing is \$6.50, while the new Arcade Plus listing is \$7.50.

TAPED PROGRAMS are also available of other programs that have appeared in the ARCADIAN. We have tapes of the "BEST OF ARCADIAN" for 1979, 1980, and 1981. Inquire as to contents and prices.

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San Jose, CA 95127-9990

408-272-1060  
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**TAPE LOADING PROCEDURE**

1. This tape will only load with an AstroVision BallyBasic Videocade #6004.

2. High tape recorder volume levels will usually produce a good transfer of data. Adjust tone control to 'treble'.

3. Load the first program, LOGO, using the :INPUT command. When the cursor, ■, reappears, either: STOP the recorder and RUN the program; or re-enter :INPUT and the next program will automatically enter the computer, showing title and author. Again, when the cursor reappears, make the same decision, etc.

**ARTILLERY DUEL** 2 players John Perkins

page 59

After the ground is generated and the two guns located, one will light up indicating 'ready to fire'. Adjust the barrel angle with the Knob, and the number of bags of gunpowder with the Joystick (move in all four directions). Watch out for gravity and the wind effect. When ready, pull Trigger. A gun is destroyed when less than half of it remains. The gun crew can replace a damaged barrel. Every game is different.

**BOTS** 1 player Ron McCoy

page 91

A 10x20 grid is set up, and a number of 'walls' are set up randomly, and then a number of 'BOTS' (\*) are randomly located. Your position (+) is then taken. Your first choice is whether to 'shoot' an adjacent BOT, and the second choice is which way to move. Either of these decisions requires the use of the Knob to turn the little pointer in the desired direction, or turn until it disappears if you wish to stand still. Pull the trigger to effect the decision. Then all the BOTS will move towards you, one box at a time. If a BOT hits a wall, or another BOT, it will be destroyed.

The ball is invisible until you pull the Trigger. Then you will see its path down the alley. You can control the path with the Joystick (left/right). The computer keeps score and tells you which player is UP.

CHECKERS 1 player John Collins page 12

All the moves of the board game, including double jumps. Use the Keypad to indicate the row and column that you wish to move FROM, and then the row and column you wish to move TO. Press GO after each figure. When the computer is up, it will go through five calculations in deciding where to move, and you will see the figures 1-5 as it does so. Every so often it will redraw the playing board.

CONNECT FOUR II 1 or 2 players Bob Wiseman page 94

A grid is placed on the screen. Use your Joystick to move the marker over the column that you wish to enter. Press the Trigger and the piece will go down the column as far as it can. Getting four of your pieces in a row before the computer does so will win the game. Move the Joystick back and forth to register the Win.

HAMURABI 1 player Dick Houser page 32

Push any key after the Castle appears. You are the King, and you must make decisions on running the kingdom economically. You start with 100 people, 1000 acres of land, and 3000 bushels of food. Buy and sell land, using food as barter material, saving some to feed the populace. Gain performance points based on how well you govern. If you last ten years, you have done well. Of course, we have thrown in a few random disasters to keep it from being too easy...

O-JELLO 1 or 2 players Clyde Perkins page 41

The object is to capture and retain as many spaces as possible using the rules of Othello. You can capture a space if it is occupied by our opponent, and you can sandwich him between one of your existing spaces and the new one. Pull the Trigger to register the move. You will see the computer checking all possible moves when it is Up, in the 1 player mode.

SUBSEARCH 1 player Ron Picardi page 83

When asked 'Enter Search 1 to 10', enter the horizontal value (X) (GO), and then the vertical value (Y) (GO) of your search probe. Once a probe has made contact, you will have missiles to fire to three depths. Meanwhile, the sub is looking for you...

2000AD 2 players Ed Larkin page 42

A shoot-em-up duel between an invader craft and a ground station. Use the Joystick to move about, the Knob to point your laser, and the Trigger to fire.

YAHTZEE 1 to 4 players Bob Wiseman page 74

Use the Joystick (JY) to position the arrow on the die you want re-rolled. Push JX to erase the die. Pull the Trigger to re-roll. After three rolls, you will be shown the scores. Use JY to position the arrow to the one you want and pull the Trigger. Scores almost like the real game.

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# ARCADIAN

## NOTES

These NOTES are provided to introduce the new ARCADE owner to techniques and effects that can be generated by the Tiny Basic cartridge. Considerably more detail can be found in the ARCADIAN articles referred to in the text. In addition, a listing of available publications that can assist the more advanced programmer is included.

The ARCADIAN articles were written as descriptions of the original "Bally Basic". While this cartridge has been superseded by the current "AstroVision Basic", the explanatory material remains applicable. As new material is discovered and developed by experimenters, it will be documented in the ARCADIAN.

Your inputs are solicited, as production of the ARCADIAN is almost totally based on subscriber inputs.

**SCREEN CHARACTERS** The Arcade divides the tv screen into 16320 individual dots, called pixels. This is disposed at 102 high by 160 wide. The lettering of the Arcade is 5 pixels wide-plus one, and 7 pixels high-plus one. (The 'one' is to prevent adjacent letters from running together.) A full explanation of controlling location is defined in Vol. 1, page 50, while methods to drive the lettering size upwards start on page 45.

Home-brewed characters can be generated by means of a method defined in Vol. 3, page 83. In this program, a 16x10 matrix can be selectively filled in to create a character. A further expansion of this technique is described in Vol. 3, page 128, wherein the computer is made to do most of the work.

**MEMORY DUMPS** The Basic can be asked to identify what is located within its memory registers in binary or hexadecimal notations by some simple programs. (binary, Vol 1, p.43; hex, page 44, for example)

**SOUND GENERATION** lengthy explanation of the operation of the sound systems is found in Vol. 1, pages 62-66 and 70-73

**MUSIC GENERATION** (using the available three-tone system) is a subset of the sound generation system, and is covered by articles in Vol. 2, page 62, and Vol 4, page 10

**MACHINE CODE** programs are possible in the Arcade:-

%(n) activates the PEEK/POKE relationship. In order to perform a PEEK function, where one observes what is stored in a memory location, one commands A=%(nnnn) then a PRINT A will result in the value located in location nnnn

To place A into location nnnn, one commands %(nnnn)=A.

CALL is a direct command to intercept a program within the system ROM. Try CALL 3177 or CALL 4910.

Putting all of this together, and knowing how the insides of the Arcade works, enables one to write programs in machine code directly from the Keypad. The first article discussing this is in Vol. 1, page 25. There are a number of subsequent articles touching on various parts of the problem.

ARCADIAN  
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$$\begin{aligned}
 "Tq" &= V_0 / 1 \\
 "80" &= V_1 / 2 \\
 "51" &= V_2 / 3 \\
 "82" &= V_3 / 4
 \end{aligned}$$

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Title	YR	Type	Number of Equipment Players Required
ASCADIAN NEWSLETTER (ASCI)	Bob Fabris, Publisher		
82 Tutorial	88, AB		
82 Misc.	AB		
5 Circuit: Layout	BB		
Chemistry: Symmetrical	1P BB, 1H		
52 Game, Space	BB, 1H		
52 Game, Maze	BB, 1H		
51 Time	BB, 1H		
79 Game, Casino	1-4P BB, 1-4H		
88 Graphics	BB, AB, 2H		
88 Graphics	BB, AB, 2H		
88 Game, War	2P BB, 1H		
81 Tutorial	BB		
82 Game, Skill	1-4P BB, 1-4H		
79 Game, Chase	1P BB, 1H		
88 Tutorial	BB		
79 Tutorial	BB		
79 Tutorial	BB		
59 Tutorial	BB		
81 Game, Logic	1-4P BB, 1-4H		
81 Game, Skill	2P BB, 1H, 2H		
79 Game, Sport	2P BB, 1H, 2H		
82 Game, Sport	2P BB, 1H, 2H		
82 Game, Sport	2P BB, 1H, 2H		
88 Utility	BB		
88 Game, War	2P BB, 1H, 2H		
82 Game, Board	2P BB		
88 Educational	2P BB		
88 Game, Board	2P BB		
79 Personal	BB		
79 Personal	BB		
88 Game, Logic	1P BB		
88 Game, Space	1P BB		
88 Tutorial	BB, BR		
81 Graphics	BB, 1H		
81 Graphics	2P BB, 1H		
88 Game, Sport	2P BB, 1H		
82 Game, Skill	1P BB, 1H, 2H		
82 Business	BB		
82 Tutorial	BB, AB		
82 Tutorial	BB, AB		
82 Tutorial	BB, AB		
82 Game, Skill	2P BB, 1H, 2H		
79 Tutorial	BB		
81 Game, Board	1P BB		
81 Graphics	BB		
81 Graphics	BB		
81 Graphics	BB		
81 Graphics	BB		
88 Educational	BB		
81 Game, Logic	BB		
81 Graphics	BB		
81 Graphics	BB		
88 Educational	BB		
81 Game, Logic	BB		
81 Graphics	BB		
82 Graphics	BB		
82 Graphics, Utility	1P BB		
82 Game, Logic	BB		
81 Business	BB only		
88 Graphics, Art	BB		
88 Graphics	2P BB, 1H, 2H		
88 Game, Logic	1-2P BB, 1-2H		

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Count the Dots	B8	Game, Skill	1P	BB, 1H
Creating Spec. Graphics	B1	Tutorial, Logic	2P	BB
Crypt-O-Rams	B1	Game, Skill	1P	BB, 1H
Darts	B1	Game, Race	1-2P	BB, AB, 1-2H
Data Storage	79	Tutorial	BB	BB
Day of Week & Calendar	79	Time	BB	BB
Desktop Coach	79	Game, Hunt	1P	BB, 1H
Distance Between 2 Pts	B1	Game, Personal	1P	BB
D&D Speedway	79	Hath	1P	BB, 1H
Elect. Visual. Center	B2	Game, Skill	1P	AB, 1H
File Search	B2	Game, Skill	BB only	BB only
Frequencies	78	Tutorial	1P	BB, AS, 1H
Frog	79	Sound	1P	BB, AS, 1H
Goodies	B2	Game, Skill	1P	BB only
Golf	B1	Game, Sport	1-4P	BB, 1-4H
Grandfather Clock	B1	Time, Graphics	BB	BB
Graphic Character Maker	B2	Graphics	BB	BB
Graphic Character Viewer	B2	Graphics, Utility	BB	BB
Graphic Program	B2	Graphics	BB	BB
Graphics Tablet Simulator	B2	Graphics	BB	BB
Halloween Ghost	B8	Graphic, Economic	1P	BB, KP
Humor	79	Game, Word	2P	BB, 1H
Hello Dolly	79	Music	BB	BB
Hex Poker	B1	Utility	BB	BB
Hex to Decimal	B1	Utility	BB	BB
Horizontal Scrolling	B2	Tutorial	AB	AB
Horizontal Scrolling II	B2	Tutorial	AB	AB
Horseace	B8	Game, Sport	1-4P	BB, KP
Horse Racegame	B8	Game, Sport	1-4P	BB, KP
Hydroponics	B8	Game, Word	1P	BB, ER
Hy Statements	79	Tutorial	BB	BB
If Statements	79	Tutorial	BB	BB
IF-AND,OR	79	Tutorial	BB	BB
Interrupt Routine	79	Tutorial	BB	BB
Interrupt War	B1	Game, Space	1P	BB, 1H
I/O Switch	B2	Project	AB	AB
JeKvI & Hyde	B2	Game, Maze	2P	AB, 2H
Keno II 2.8	B1	Game, Casino	1P	BB
Letter Reader	B2	Game, Space	1P	BB, AB, 1H
LINE Numbers	B2	Tutorial	AB	AB
Logo	B2	Tutorial	AB	AB
L-1 Reverse Box Set	79	Graphics	BB, AB	BB, AB
Machine Language Monitor	B2	Graphics, Art	MUM	MUM
Machine Language Monitor	B2	Review	MUM	MUM
Magic Register	B2	Tutorial, Graphics	1P	BB
Masternind I	B8	Game, Logic	1P	BB
Masternind II	B8	Game, Board	1-2P	BB
Match	79	Tutorial	BB	BB
Memory Addressing	79	Game, Board	1-2P	BB
Memory Contents-Binary	79	Utility	BB	BB
Memory Contents-Decimal	79	Utility	BB	BB
Memory Contents-Hex	79	Utility	BB	BB
Memory Comp	79	Utility	BB	BB

## NOTES

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**EXECUTIVE SOFTWARE** - a listing of software that does something in the Arcade, and how to execute it. Part of the document lists the ROM subroutines that are executed with an RST 38H instruction, while the second part contains the listings of the on-board ROM from 0000-1FFF. 27 pages.

**ASTROVISION BASIC** a completely disassembled listing of the Basic cartridge on 70 pages, with comments. (We have a similar listing of the Bally Basic.)

**BALCHEK** A program was developed by Bally software engineers which "looked at" the operation of the printed circuit board and then determined if any problems existed, all the while doing a burn-in operation. It would then identify the errant problem area. The listing and its instructions in over 60 pages. This program is also available on a chip, and in a complete, ready to operate tool.

## NOTES

These NOTES are provided to introduce the new ARCADIAN owner to techniques and effects that can be generated by the Tiny Basic cartridge. Considerably more detail can be found in the ARCADIAN articles referred to in the text. In addition, a listing of available publications that can assist the more advanced programmer is included.

The ARCADIAN articles were written as descriptions of the original "Bally Basic". While this cartridge has been superseded by the current "AstroVision Basic", the explanatory material remains applicable. As new material is discovered and developed by experimenters, it will be documented in the ARCADIAN.

Your inputs are solicited, as production of the ARCADIAN is almost totally based on subscriber inputs.

**SCREEN CHARACTERS** The Arcade divides the tv screen into 16320 individual dots, called pixels. This is disposed at 102 high by 160 wide. The lettering of the Arcade is 5 pixels wide-plus one, and 7 pixels high-plus one. (The 'one' is to prevent adjacent letters from running together.) A full explanation of controlling location is defined in Vol. 1, page 50, while methods to drive the lettering size upwards start on page 45.

Home-brewed characters can be generated by means of a method defined in Vol. 3, page 83. In this program, a 16x10 matrix can be selectively filled in to create a character. A further expansion of this technique is described in Vol. 3, page 128, wherein the computer is made to do most of the work.

**MEMORY DUMPS** The Basic can be asked to identify what is located within its memory registers in binary or hexadecimal notations by some simple programs. (binary, Vol 1, p.43; hex, page 44, for example)

**SOUND GENERATION** lengthy explanation of the operation of the sound systems is found in Vol. 1, pages 62-66 and 70-73

**MUSIC GENERATION** (using the available three-tone system) is a subset of the sound generation system, and is covered by articles in Vol. 2, page 62, and Vol 4, page 10

**BOOLEAN MATH** is utilized in some functions and commands, and is discussed in Vol.1, pages 41,44, 52,55, amongst others.